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Editor:

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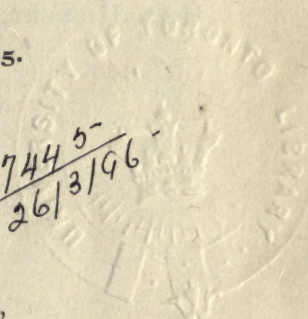
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[No. 1

Original Communications.

LAMINECTOMY FOR FRACTURE-DISLOCATION IN THE CERVICAL REGION.*

BY FREDERICK WINNETT, M.D., M.R.C.S. ENG.,

Demonstrator of Anatomy, Toronto University; Surgical Registrar, Victoria Hospital for Sick
Children; Surgeon to Home for Incurables.

STUART P—, æt. 29, while bathing at Niagara-on-the-Lake, about noon, July 18th, dived from a pier and sustained a fracture of the cervical vertebræ. Running ten or fifteen yards he dived from the pier about three feet above the water, which was not more than four feet deep. His head was seen to strike the sand, doubling under him, and his body float to the surface. When rescued, he said he experienced a terrible shock through his body, and that he had hurt his neck.

In the evening a consultation was held, there being present Drs. Anderson, Oldright, Peters, Ross, and myself; and an operation advised.

*Read before the Toronto Medical Society, Dec. 13th, 1894.

His condition was as follows :

Mind perfectly clear.

Sensation normal as low down in front as nipples and shoulders.

Tactile sensation was present, although indistinct, over the remainder of the surface, with the exception of forearms and hands. Contact of clothes was hot and painful.

Sense of pain was absent.

There was retention of urine, and fæces passed unconsciously.

Pupils were contracted.

Some irregularity of the spines of fourth and fifth cervical and tenderness were noted.

All the muscles below the neck were paralyzed, with the exception of the diaphragm.

On the following morning I assisted Dr. G. A. Peters to perform laminectomy. The patient was turned well on his right side, and in order not to embarrass the movements of the diaphragm pillows were placed beneath chest and hips. His head was supported with sandbags. The neck having been shaved and washed with a solution of carbolic, an incision was made from above down over the spines for about three or four inches, with its centre over the fourth or fifth spine. The spines and laminæ were quickly cleaned. The supraspinous ligament between fourth and fifth vertebræ was found ruptured, spine of fourth bent to the left, and lamina of fourth on left side fractured. The edges of the wound were drawn apart with retractors, while the lamina of the fourth on right side was partly divided with Hey's saw and completed with the bone forceps. The soft structures were divided, and with necrosis forceps the spine and laminæ were drawn forcibly away. This exposed the cord surrounded by the membranes, which appeared healthy. As the membranes were tense, the lamina of fifth was similarly divided and removed. Pulsation was now noticed. A small spiculum of bone was removed from the membranes in the region of the fractured lamina, causing some blood to escape in a constant stream and cerebro-spinal fluid in a jetting manner, but this soon ceased. Hæmorrhage gave no particular trouble, and ligatures were not required. Deep sutures of silkworm gut were inserted, and a superficial continuous suture of horsehair. It was dusted with iodoform, and iodoform and double cyanide gauze applied, and a pad of absorbent cotton. The head was supported on a small pillow, and sandbags placed on either side. The operation occupied three-quarters of an hour.

First week, July 19. 6.15 a.m., temperature, 103°. At 1.45 p.m. went up to 105.4°. Ice pack applied ; 5 p.m. temperature, 99.8°. For the remainder of the week the temperature ranged between 103.6° and 97°.

Pulse fairly normal. Morphia, gr. $\frac{1}{4}$, required each night to induce sleep. Chloral and bromide were not found satisfactory. Urine withdrawn every eight hours.

July 20. 12 p.m., respiration 10 and shallow. Liq. strych., *m v.*, given by hypodermic.

July 21. Flatulence present, and during subsequent illness was very troublesome. 11.40 a.m., temperature, 97° ; pulse, 48; respiration, 13. Strychnine and brandy administered and heat applied. Liq. strych., *m v.*, repeated every six hours. 12 a.m., temperature, 97.4° ; pulse, 48; respiration, 12, and continued to improve.

July 22. Although every precaution was taken cystitis developed, and thenceforward required antiseptic washing. Wound was dressed and found healthy.

July 23. Placed on hair mattress. Bowels kept regular by enemata or laxatives. Vomiting and flatulence troublesome.

July 24. Delirious for a short time. Moved shoulders.

Second week, July 26. Temperature ranged from 99° to 104° . On passing catheter bladder empties itself without requiring to press abdomen. Sutures removed, and wound healed by first intention. Strychnine discontinued.

July 28. Delirium for a time.

July 29. Urine passed involuntarily once. Moves head a good deal.

July 30. Removed to Toronto General Hospital.

July 31. Teeth chattering. Temperature, 98° ; feels cold.

Third week, August 1. Temperature for week normal. Cremasteric and plantar reflexus present.

August 2. Bowels and bladder act involuntarily. Incontinence of urine continues, with a residual of about 8 oz.

August 6. Prick of pin over lower end of radius causes pain. All muscles respond to strong faradic current. Muscles atrophied about one-third.

Fourth week, August 8. Towards end of the week temperature began to rise, after which it was seldom normal. Conscious of position of limbs and all of body, and feels that "hands are attached to arms."

Fifth week, August 16. Cannot discriminate between hot and cold applications, each causing reflex action. Knee-jerk absent.

August 19. Hypostatic congestion of lungs; strychnine, atropia, and brandy given. By a mistake $\frac{1}{20}$ grs. atropia were administered hypodermically in twenty-two hours. Pupils dilated, and suffers from delusions and dysphagia.

August 20. Delirious.

August 21. Lungs clear.

Sixth week, August 22. Contact of clothes causes reflexes in lower limbs. Rational, and speaks of his delusions.

August 23. Knees slightly flexed. Can distinguish which fingers are touched.

August 26. Flexes left elbow, and right biceps contracts slightly.

Eighth week, September. Small bed sore formed.

Tenth week. Removed to England.

Nineteenth week, November 27. Reports say bladder normal, uses left hand freely, right not improved.

Since the recent utterances of Prof. Thorburn before the Royal College of Surgeons and British Medical Association are likely to become the dictum of the profession, it may be of interest to consider his deductions and criticize them in the light of published cases.

First, let us dismiss as beyond argument cases in which operation is advised :

- (1) Compound fractures.
- (2) Fractures by direct violence of spines or laminæ.
- (3) Hæmorrhage into spinal canal.
- (4) Gravitating hæmorrhage.
- (5) Pachymeningitis or peripachymeningitis, following injury at a distant date.
- (6) Injuries of cauda equina, in which operation between fourth and sixth week is advised, if there has been little or no recovery, or if recovery has ceased to progress.

In unilateral dislocations, which are almost entirely confined to the cervical region, the cord is little, if at all, injured, and they are often reducible, thirty-five out of forty-one cases proving successful.

There is, then, only left in dispute the treatment of bilateral fracture-dislocations. Of this common class may be excluded as unfit for operation :

- (1) Those with recoil.
- (2) Where there is a total transverse disorganization, indicated, as Bastian and Boulby have pointed out, by total loss of all reflexes, with complete insensibility to touch and pain, and motor paralysis below the lesion. Later on rapid atrophy of muscles and reaction of degeneration.

For the remainder of this class the treatment consists in, either, (1) expectant ; (2) reduction ; (3) laminectomy—(a) primary, (b) secondary.

(1) *Expectant*. C. B. Keetley reports a case of fracture-dislocation of cervical cured by rest and extension. Also one in dorsal region by plaster of Paris jacket.

(2) *Reduction.* Reginald Harrison reports a case of cure in lower dorsal region by this method, and Noble Smith one in the dorso-lumbar, but its utility is very doubtful. Thorburn says reduction is not very difficult, but almost certain to return, and he can find no satisfactory evidence that the reduction has ever cured or materially relieved the medullary symptoms.

(3) *Laminectomy.* Speaking of seven cases of operation of which he had experience, Thorburn says: "In none of the cases did any real benefit result; all those in which the injury was in the cervical region died; all those in which it was below the cervical lived, but did not recover from paralysis. And the published cases, of which there are about 200, show, to my mind, no better results if we exclude injuries of the laminæ, hæmorrhage, and operations on the cauda equina. I have, indeed, not satisfied myself that there have been any successes as regards recovery of function, save such as may be attributed to the regeneration of nerve roots only, or to the natural recovery of a cord which was but very slightly injured. And, further, if it were shown that in one or two instances among the 200 published cases there had been a definite improvement or recovery, I should be inclined to regard such as the sequel of some error in the original diagnosis, rather than to allow a single instance to invalidate a rule based upon such extensive premises."

In the entire literature I am able to find but few successful cases, and with your permission I shall briefly relate them.

CASE 1. Surgeon, McCosh. Man, thirty-three years of age. Eighteen months previously sustained a fracture or dislocation of fourth, fifth, or sixth cervical. For nine months bedridden. Caused by shackle falling on his head and doubling him up. Completely paralyzed below the clavicles. At time of operation, atrophy of muscles, but stands with assistance. Spastic paralysis of left arm. Some use of right arm, not of hand. Constant pain in upper limbs.

Operation. Fourth displaced one and a quarter inches to left. Removed arch of fifth; dura very vascular and attached to arch. Not opened.

Result. Gets about, uses arms, walks four miles, and writes with left hand.

CASE 2. Surgeon, John A. Wyeth. H.A., æt. 21. September 1st, 1889, thrown from a cow-catcher to track. Loss of motion from pelvis down, bladder and rectum paralyzed.

Operation. April 30th, 1890. Removed laminæ, last two dorsal, and upper two lumbar. Bodies found crushed, and cord partly divided. Undivided part compressed by laminæ of vertebra above and body below. Compressing bone was removed and dura closed.

Result. Immediate slight improvement in motion, especially in feet. 1894, good use of legs and feet, but uses cane.

CASE 3. Surgeon, Ridenaur. M.N., æt. 28. December 11th, crushed by an overhead beam in such a manner as to crush centre of his back forwards at an acute angle, frightfully lacerating and crushing parts. Seventh dorsal depressed one inch, and eighth absent. Lamina of seventh dorsal broken and separated. Transverse processes of seventh torn off. Intervertebral disc of seventh forward one inch. Spinous process of eighth penetrating cord. Body of eighth fractured. Membranes punctured and lacerated, and hæmorrhage into arachnoid space.

Operation. Removed roof from sixth and ninth dorsal. Sensation returned at once. Motion in recti at end of fourth day. Catheter required till seventh day. Sphincter ani restored at end of first week. Knee-jerk restored at end of second week. Lift limb from bed at end of fifth week. Walk with crutches at end of three months. No fever.

CASE 4. Reported in *American Journal of the Medical Sciences*, April, 1892. Fracture-dislocation between tenth and eleventh dorsal. Opened five hours after, and large extra-theclal clot washed away; vertebræ reduced, and spines held together by silk. Paralysis and hyperæsthesia passed away.

CASE 5. Surgeon, Boyle. S.M., æt. 20. Struck in back by train, May 8th. Loss of motion and sensation below hips. Reduction failed. For first week catheterization. Pain and hyperæsthesia in both legs.

Operation. July 12th. Dislocation backward between ninth and tenth, above and forward of last dorsal, and first lumbar below. All arches removed, and bodies grooved. Second day after operation slight movement in toes, also sensation. At present has good sensation and motion.

CASE 6. Surgeons, Church and Eisendrath. Fracture-dislocation of tenth dorsal, with complete paraplegia. Extra-dural hæmorrhage found, clot removed, and vertebræ reduced.

Result. Cured.

Wagner and Golding Bird report similar cases.

Professor Thorburn gives four methods in which the cord suffers:

(1) By approximation of the laminæ of the vertebræ above to the body of that below. The pressure may be permanent, or the vertebræ may recoil.

(2) A fragment of bone may be driven back upon the spinal cord. Very rare.

(3) Displacement back of intervertebral disc.

(4) Pressure of hæmorrhage.

The diagnosis between these various forms of injury is often impracticable, and might justify an exploratory operation.

The cases above quoted, although instances of method No. 1 without recoil, are complicated by one or more of the other varieties. Cases 1 and 2 are secondary operations.

Lloyd, in his report of 103 cases of laminectomy, gives five per cent. of cures in the cervical, seven per cent. in the dorsal, and twenty per cent. in the lumbar region.

Thus cures are reported following each method of treatment, and the final settlement of the question must await statistics. At present the doubtful advantage of laminectomy over the expectant line of treatment appears to be counterbalanced by the mortality of the operation *per se*.

NOTE.—In connection with the diagnosis, I wish to point out the difficulty of localizing a lesion in the cervical region from an ordinary anatomical knowledge of the origin of the nerves. Speaking generally, we have the following : The musculo-cutaneous supplies the flexors of the elbow, but, as it receives fibres from the fourth, fifth, sixth, and seventh cervicals, its paralysis would leave the location of the lesion indefinite. In practice, however, the fifth nerve is found to preside over this action.

The musculo-spiral supplies the muscles on the back of the arm and forearm, and therefore extends the elbow and wrist. It, however, is made up of fibres from all the nerves from fourth cervical to first dorsal, and, consequently, helps a diagnosis very little. The sixth nerve extends the elbow, and the seventh the wrist. The median supplies most of the flexors of the wrist, but, receiving fibres from all the plexus, it leaves a diagnosis uncertain. Here the eighth cervical is found to govern the action. The first dorsal supplies the intrinsic muscles of the hand.

Since the origin of these nerves is opposite the bodies of the vertebræ above, we have : Centre for flexing elbow, opposite body of fourth cervical ; centre for extending elbow, opposite body of fifth cervical ; centre for extending wrist, opposite body of sixth cervical ; centre for flexing wrist, opposite body of seventh cervical ; centre for hand, between seventh and first dorsal.

PATHOLOGY OF GALLSTONES.*

BY HIBBERT HILL, M.B.,

TORONTO.

GALLSTONES are more or less solid concretions, varying widely in size, number, and composition in different cases, formed in some part of the great system of ducts which originate amongst the liver cells, and terminates at the duodenum, presenting in one part of its course that peculiar diverticulum, the gall bladder.

The most common site of origin of gallstones is the gall bladder itself. Here they may be found of any size up to five inches in length; generally large, ovoid, and smooth when single, smaller and faceted when multiple. When very numerous the stones are usually also very small, so small in some cases that the term gall sand has been applied to them; hence the rule that the size is inversely proportional to the number. Occasionally six or eight smooth, oval, unfaceted stones have been found together. Sometimes mulberry-shaped stones of small size occur.

In the intra-hepatic ducts the size of the stones corresponds roughly with that of lumen of the duct at their site of formation. They may occur as very numerous soft and small concretions, distributed widely throughout the small interlobular bile ducts. In the larger ducts they may reach the size of cherry stones; obstruction does not necessarily follow, so that the bile may sometimes flow past them. Occasionally they are cylindrical or even branched, forming casts of the ducts, and such cylindrical stones may be perforated from end to end, forming then a tubular lining for the duct, through which the bile may pass.

In the hepatic duct stones rarely form. They have been found, however, in diverticula connected with the duct. Stones found in the hepatic as well as in the cystic and common ducts are generally in process of descent from their site of formation higher up in the liver or in the gall bladder.

The bile is the source of all the various substances found as constituents of gallstones, with the exception of certain lime salts which

*Read before the Toronto Medical Society.

are derived from the mucous glands of the hepatic mucous tract, and, of course, of such foreign bodies as have been found imbedded in the stones. The bile is an alkaline aqueous solution of cholesterin, bile pigment, bile salts, and certain inorganic salts of calcium and sodium ; some fat and mucin is present, and also traces of copper, manganese, and iron. All of these substances have been detected in gallstones ; generally all may be found in any one stone. Almost always at least two of them occur ; it is rare to find but one.

The formation of a gallstone occurs as the result of such changes in the chemical composition of the bile as will throw some of its constituents out of solution, these changes being produced by derangements either of the general metabolism of the body or of the special metabolism of the liver.

Of these constituents cholesterin is the most important. This substance, commonly known as "bile fat," is not a fat at all, but an alcohol, the only free alcohol occurring normally in the body. It is insoluble in water, but dissolves readily in an aqueous solution of the (alkaline) bile salts, sodium taurocholate and glycocholate. It is the presence of these salts in normal bile which keeps the cholesterin normally present, in solution. Should cholesterin be present in excess, and so out of proportion to the amount of the salts, or should the salts be reduced in amount, the cholesterin remaining normal, precipitation of the cholesterin is very likely to occur. The first of these conditions obtains in old age where cholesterin is formed to excess in the tissues, and found in excess in the bile. The second condition obtains when the reaction of the bile becomes neutral or acid, especially in the uric acid diathesis, and is probably due to the decomposition of the bile salts consequent on the removal of their base, sodium, by the excess of acid, thus reducing the amount of solvent necessary for the cholesterin.

Another prominent constituent of gallstones is bile pigment. This substance, known as bilirubin, is soluble in alkaline, but not in acid liquids, and is, therefore, like cholesterin, also precipitated from bile in which an acid reaction has developed. Reduction in the amount of sodium salts generally, and concentration of the bile consequent on retention for any cause, also favor the precipitation of these substances.

The third important constituent of gallstones, lime, although occurring normally in bile to a small amount, is derived chiefly from the mucous glands of the gall bladder, etc., being formed in excess as a result of deranged metabolism, accompanying the formation of calculi generally.

The remaining constituents of gallstones, already mentioned, occur in small quantities only, included in the mass of the stone.

The process of formation, then, consists in precipitation from the bile of cholesterin and bile pigment, and of an excessive manufacture of lime salts by the mucous glands of the hepatic tract. These substances so precipitated tend to form upon any small solid particle previously present ; successive depositions occurring at intervals result in the gradual enlargement of the calculus, at the same time giving to it that laminated structure which is generally so conspicuous. A number of such calculi, formed and growing at the same time, will, by mutual pressure, become faceted. Fusion of such while small accounts for the occasional discovery of multi-nucleated stones.

The physical characters of gallstones vary with their composition. Stones of pure pigment are small, granular, homogeneous, and black or greenish black in color. Stones of pure cholesterin, on the other hand, vary in size, and may be quite large, are laminated, the laminæ presenting radiating striæ, crystalline in fracture and crystalline in appearance when fresh, though becoming opaque on exposure to the air. They are light, have a soapy feel, and are whitish in color. Pure lime stones are often larger, generally single, very hard, have an earthy fracture, are laminated, and may be whitish or grayish in color. Pure stones are rare, however ; mixtures of at least two of these substances are more common. In most cases, all three are found, together with other matters in small amount, as already mentioned. Such stones present three distinct parts, as a rule, a central nucleus, a concentrically laminated mass surrounding the nucleus, and a thin shell enclosing the whole. The nucleus, generally single, but occasionally multiple, is dark in color, and consists usually of a mixture of bile pigment, mucin, and lime ; rarely of cholesterin crystals, or blood clot. Foreign bodies have been found occasionally as nuclei ; parasitic worms, a needle, quicksilver in a case of mercurial inunction, and once a plum stone. This last was found in a calculus which had formed in an hepatic abscess, due to adhesion and perforation from the stomach in a case of gastric ulcer. The body of the stone is usually cholesterin, and is laminated and light in color. The shell is dark and hard, and consists of pigment and lime.

Gallstones, once formed, may disappear by passing onward, *per vias naturales*, into the intestine ; rarely by gradual solution on the return of the bile to its normal composition ; possibly by attrition. In the ducts or gall bladder they may lie quiescent for years, or may set up local inflammatory ulceration, often leading to adhesion and perforation, the stone then passing from its original place into various parts of the body, as the liver, the lung, the urinary bladder, the stomach, the small and the large intestine ; or they may become encysted, or form abscesses in the liver or

peritoneum. Finally, they may pass outward through the skin. The numerous and interesting secondary results, and their symptoms and diagnosis must be left, however, to the other speakers.

The recognition of gallstones when passed per rectum is simple. The fæces should be mixed with water, shaken well, and decanted, the stones being then found deposited at the bottom of the vessel. Or the liquefied fæces may be strained through a coarse sieve of any kind. Their physical characters have already been described. Chemically, the presence of cholesterin may be determined by pulverizing the stone, shaking the powder with alcohol, and then boiling the mixture. The cholesterin is thus dissolved, and if the alcohol is allowed to cool slowly is re-precipitated and may be recognized under the microscope, forming thin, colorless, transparent rhombic plates of different sizes, and presenting one or more notches cut from one corner. A very striking chemical test for cholesterin may also be performed. Treat the pulverized calculus with chloroform. The cholesterin is dissolved. If now the chloroform solution of the cholesterin is taken up with a pipette and allowed to flow gently out again upon the surface of strong sulphuric acid, a brilliant blood-red color develops at the junction of the two liquids.

Bile pigment is soluble in hot chloroform, and may be extracted from the calculus, precipitated with alcohol dissolved in a weak solution of potassium hydrate, and tested for as in uranalysis.

SOME HISTOLOGICAL CHANGES IN THE LIVER IN TYPHOID FEVER.*

BY JOHN A. AMYOT, M.B. TOR.,

Demonstrator of Pathology, University of Toronto ; Assistant Surgeon to St. Michael's Hospital ;
Physician to House of Providence.

THERE is very little mention of changes in the liver in typhoid fever in the text-books. It is strange, too, for some effects must be produced by lesions so gross as are found.

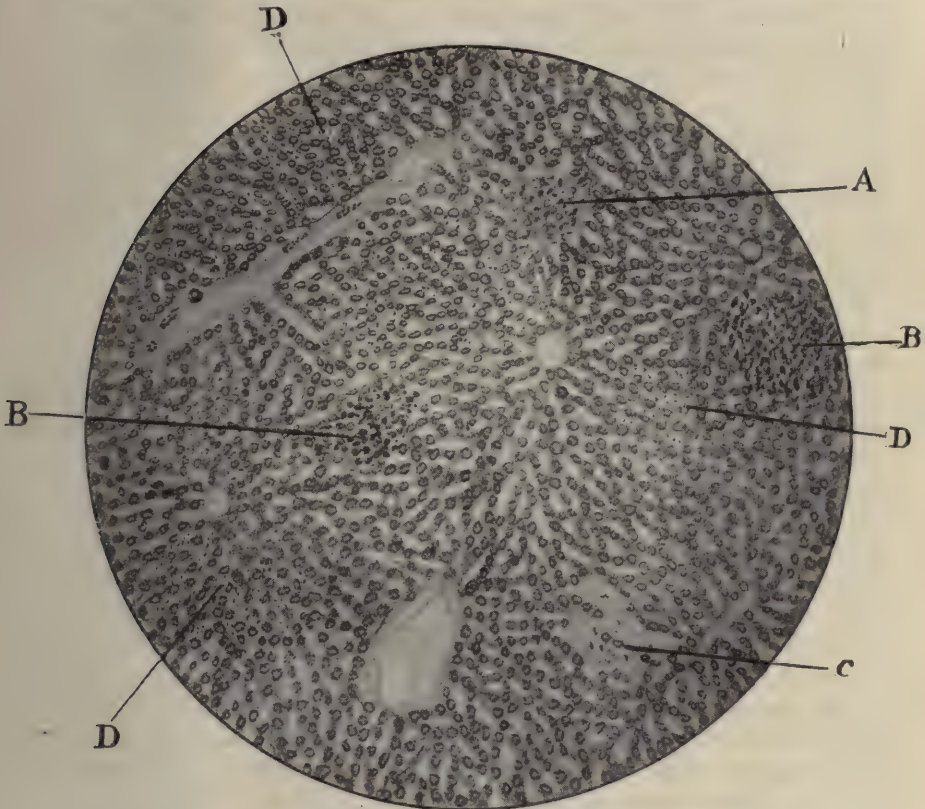
The specimens I present you are from seven cases of typhoid fever. Four I have the clinical history of. The other three have been gotten wherever I could.

The macroscopic appearances of Nos. 1, 2, 4, and 7 were the same. They were not enlarged. No. 3 was enlarged perceptibly. The cut surface of all was mottled. All gray. The lighter colored portions yellowish, as if fatty. No nodules could be seen anywhere. Laudet speaks of nodules of a light grayish color, rather waxy-looking, being found, these varying from a pin-head to a pea in size. Gall bladder unchanged, grossly, at least, in any of them.

All specimens prepared in alcohol. They were taken from those parts which seemed to be most affected grossly. Microscopically, in all seven specimens little nodules were found ; in some specimens in small numbers, in others in comparatively great numbers. The nodules vary from about one-fortieth to one-fifteenth of the size of the lobules, and are distributed in no regular fashion. Sometimes found in portal-vein zone, sometimes in intralobular-vein zone, but most frequently in middle zone. Nodules in the *same specimen* all look alike (resemble one another closely), with the exception of those in No. 4, where two kinds are present. These nodules may be divided into two classes, the lymphoid and the necrotic. Some of the authorities mention the one, some the other. Neither of them seem to be of new growth. There is no sign of expansile pressure on the surrounding tissue. The columns of cells are not deviated. The cells are not flattened. The

* Read before the Pathological Society of Toronto.

capillaries are not narrower than farther away from the nodule. All the nodules seem to have been first alike. They became invaded afterwards to a greater or lesser extent by lymphoid cells. Against this, it is true, all the nodules in the same specimen are invaded alike. This might be explained by saying that the damage was all done at the same period, so the invasion took place to the same extent in all. I can offer no other explanation for



A, Necrotic Area. B, Lymphoid Area. C, Area of Capillary Dilatation. D, Cell Infiltration.
Lutz 1+3. X 57.

the similarity. The specimen in which the two forms were present would have had two invasions of toxic materials. The patient died on the fourteenth day of the first attack. The nodules are made up of masses of unstained granular protoplasm, the size of, or much smaller than, hepatic cells. In some of these masses the nuclei are still visible, though unstained; some are stained, but the cell protoplasm even then is nearly invisible. Some of the nuclei, are broken up into several

fragments, chiefly round, which stain diffusely. The capillaries of the nodules are filled with granular material. Lymphoid cells are found in the capillaries chiefly, some few between the hepatic cells. The so-called lymphoid nodules differ from this only in the difficulty with which the former cell elements are seen, and on account of the great number of lymphoid cells present. The nodules are sharply cut off from the surrounding tissue. The cells nearest the edge are most nearly normal in their staining qualities. Some of them are multinuclear. In some of the nodules the lymphoid cells are very few in number, in others there are so many present that one would almost take them for hypertrophied, previously-existing lymphoid masses, such as normally exist in the liver. The cells are too widely apart, though, and the trabecular network has other constituents besides lymphoid cells, and, again, the nodules are in the lobules, where lymphoid masses are not seen in normal specimens.

Besides these nodules there are present areas of capillary dilatation with only the nuclei remaining in the hepatic cells. These areas are of varying size and location, but are generally larger than the nodules before described; generally roundish; not so sharply marked off from the surrounding tissue as the necrotic nodules; present in four out of the seven specimens. It is not *nutmeg* change. There is no pigmentation. The other changes in these specimens are nutmeg change, atrophy, and pigmentation of hepatic cells and dilatation of capillaries in the intralobular-vein zone; marked in two and slight in one out of the seven specimens. Fatty degeneration of the cells in the portal-vein zone in two out of the seven specimens, but this is not present in the nutmeg ones. One form of degeneration seems enough for one. Beyond granulation, there is no change in the protoplasm of the cells. The nuclei contain a good deal of chromatine, and are large. Multinucleation in all, but most marked in No. 4. The greater number of large nuclei are found in this specimen too.

There is not sufficient change in the cells of these specimens to account for the mottling in the gross. Laborde attempts to explain this by saying that it is most likely due to an uneven filling of the capillaries from nerve influence on the vessels; dilate in one part and contract in another. Have not been able to confirm this on account of my specimens being prepared in alcohol, thus washing out the blood and leaving all the capillaries practically alike, and it would not require much difference in calibre to give a difference in color.

Have done nothing from the bacillar side of the question. Osler says no definite relation of the bacilli to these nodules have so far been made out. When Legry found bacilli in the liver he found them chiefly in the capillaries and hepatic veins, and sometimes even in the bile. He was able to get cultures in six out of eleven cases. He found them in sections

in six of the eleven cases, but not necessarily from those from which he got cultures. Pavone, by injecting into mammals the bacilli and their toxins, got granular-cell degeneration, but the nuclei were not destroyed, and the cells would thus recover. If injected into the portal vein in healthy animals, no effects were produced. From this he concludes that healthy liver arrests the typhoid bacilli and toxins, and that later in typhoid the reason such changes as have been described are produced is that the liver is functionally weakened in the course of the disease. Legry found that liver substance destroyed about half the toxicity of typhoid dejections.

Legry made cultures of Eberth's bacilli from the liver of a six months' foetus that was expelled during a typhoid attack of its mother. He makes no mention of there having been any lesions in this foetus' intestine.

Selected Articles.

THE MODERN TREATMENT OF PULMONARY PHTHISIS.*

By C. THEODORE WILLIAMS, M.D., F.R.C.P. LOND.,

Consulting Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.

THE treatment of phthisis has undergone various changes during the past eighty years, changes by no means so sweeping and revolutionary as those of its pathology, and it is a hopeful sign of medical progress that during the last fifty years, whilst divergent, and, indeed, antagonistic, doctrines have successively prevailed as to the origin and nature of tubercle, the treatment of phthisis has been more steadily carried on on the same lines, viz., those of fortifying and sustaining the resisting power of the patient. In early days Laennec preached the specific nature of tubercle, and Broussais maintained its inflammatory origin, in which he was supported, at a later date, by Addison, Niemeyer, and others. Then came the experiments of Villemin, confirmed by those of Simon Marcet, Andrew Clark, and Lebert and Zablonus, which established the doctrine of the specific nature of tubercle, this, again, being apparently overthrown by the experiments of Burdon Sanderson, Wilson Fox, Cohnheim, and Fraenkel, who seem to have produced tuberculosis in animals by inoculation with non-tuberculous material; but, at a later date, these results were proved to have been attained through the experiments being performed in a contaminated atmosphere, and similar experiments by Watson Cheyne and Dawson Williams, subsequently carried out in an aseptic atmosphere, failed to produce tuberculosis. Then came the wonderful discovery of the bacillus tuberculosis by Koch, which placed the specific character of the disease beyond all question, and reduced all forms of tubercle to the same category. But Koch's brilliant discovery, whilst it has largely assisted diagnosis, cannot be said to have contributed much to the progress of treatment. It was the signal for an enthusiastic

* Inaugural address delivered at the opening meeting of the Midland Medical Society at Birmingham on November 1st, 1894.

outburst of antiseptic or bacillicide measures. The unhappy phthical patient was muzzled with antiseptic respirators, he was surrounded by antiseptic atmospheres, and he had to submit to what Daremberg terms "orgies of creasote and guaiacol." Antiseptics were injected hypodermically, antiseptics were administered per rectum, and all efforts short of destroying the patient were directed to slaughter the tubercle bacillus. But it must be admitted that it is one thing to arrest the spread or development of this bacillus in a test-tube or on a cultivation-plate, and another to attack it in the tissues of the delicate human body, where, except at a few exposed surfaces, such as the mouth or throat, it is out of reach of local manipulation. Many of the antiseptics used have not even the recommendation of having been proved to be fatal to the bacillus tuberculosis, but were tried on purely theoretical grounds. But, after all, supposing these means had succeeded in destroying the bacilli then present in the lungs, what was to prevent other tubercle bacilli in greater numbers from entering and falling on the soil (proved to be vulnerable), then settling and multiplying, and thus rendering the last state of that patient worse than the first? There is, nowadays, much discussion on the contagious nature of phthisis, and the possibility of preventing much of the disease by notification and isolation; but, while it is our duty to disinfect and destroy the sputum and other secretions of phthical patients which have been proved to be sources of danger, any complete system of isolation would be quite impossible in so common a malady, and, moreover, as the evidence for its necessity is very weak, indeed, it would be uncalled for and cruel.

The next event in the history of the treatment of phthisis was the employment of Koch's tuberculin injections, which turned out to be a failure, but from which many wholesome lessons may be learnt, one of which was that any treatment which promotes, not conservative, but destructive changes, as shown in breaking down of the lung tissue and its appearance on a large scale in the sputum, cannot be otherwise than detrimental to the patient, as the area of infection, instead of being limited, is thereby considerably widened. Another lesson was that certain morbid poisons possess a distinctly elective affinity for certain organs, and appear to select old lesions in those organs. The quickness with which the lupus spots and tuberculous lesions in the lungs became the seat of active change was very remarkable, and the rapidity with which tuberculous masses of long standing broke down and cavities were formed was even more so.

Now, it seems to me that all these specific modes of treatment ignore one great factor—nay, the greatest factor of all—viz., the resisting power of the organism to disease, and it is to this that the physician should lend his aid and support; for, if his means are effectual, he can ward off disease, or, if a patient has already been attacked, he can limit its inroads,

and possibly arrest it altogether. A glance at the history of the treatment of phthisis will show that whatever success has been attained has been achieved by strengthening and fortifying treatment, whether by diet, climate, or medicines, and not by so-called specific treatment. Life in the pure air, judicious exercise, a light, nourishing dietary, and such aids as cod-liver oil and tonics, have effected more than all the bacillicide treatment put together. But these all act on the old principle of helping nature to help herself against her foes and reducing the vulnerability of the patient to attack. Now, what are the weapons of resistance with which nature works in the human body in dealing with invaders like the tubercle bacillus? On this point the brilliant researches of Metchnikoff, pursued for a long series of years, have thrown considerable light. It would appear that the invasion of any organism by microbes induces an afflux of leucocytes, or "phagocytes," as Metchnikoff terms them, to the invaded region, and these have the power to absorb bacilli, which are to be observed afterwards in their structures. The more malignant the bacillus, the rarer its presence within the phagocyte. In some instances the phagocytes overwhelm the bacilli, in others the bacilli devour the phagocytes. There are two principal forms of phagocytes—viz., (1) the macrophagus, a large uninnuclear leucocyte, generally of epithelial or endothelial origin, with a prominent nucleus, lobed or reniform, staining well with aniline dyes, and possessing much protoplasm and active amœboid movements; and (2) the microphagus, a smaller form, also staining well, multinuclear, or with one nucleus in the process of breaking up. Both these have the power of devouring bacilli, but not always the same kind, and in some instances, as in the streptococci of erysipelas, after the microphagi have devoured these the microphagi themselves are again swallowed up by the macrophagi. This bactericidal action of phagocytes is often an instrument of defence, and, in many cases, is the cause of immunity to the individual. The intervention or the non-intervention of the phagocytes seems to depend on their being attracted by some organisms and repelled by others, as they are described as having a positive chemiotaxis or attraction for certain kinds and a negative chemiotaxis or repulsion for others. Where negative chemiotaxis develops, the bacilli are unopposed, and induce the death of their host. We must remember that Metchnikoff includes a great variety of cells in the phagocyte class—not only leucocytes of the blood, but both epithelioid and giant cells. He holds that tubercle is composed of a collection of phagocytes, mesodermic in origin, which move towards the spot where the tubercle bacilli are situate and englobe them; these phagocytes either remain epithelioid in type or are converted into giant cells, which may be regarded as a further attempt on the part of the organism to protect itself against bacillary attack. The mononuclear variety of phago-

cytes seem to have the greatest influence in bacillary destruction. Thus Metchnikoff tells us that, after inoculating marmots with avian or human tubercle, he observed a characteristic degeneration of the bacilli in the interior of the epithelioid and giant cells of these animals, owing to their being but little susceptible to tuberculosis. The bacilli under the influence of these cells swell up and gradually lose their power of retaining coloring reagents. Sometimes the peripheral part, but more often the central part, of the bacillus is the first to lose its coloration. Later, the bacillus becomes converted into a sausage-shaped body enclosing a very delicate canal, and the altered bacilli collect to form a conspicuous brownish mass resembling a fragment of amber. Metchnikoff remarks that these changes are never observed in artificial cultivations, or anywhere outside the tuberculous cells. It is in diseases which possess a decidedly chronic development, like tuberculosis and leprosy, that the specific bacteria are most readily taken up by the phagocytes, and where, at the seat of the disease, we find great numbers of these phagocytes. The other side of the question is where the tubercle bacilli gain the ascendancy and destroy the phagocytes, either in the form of epithelioid or giant cells, as has been depicted by myself and others, where, at the close of the battle, no trace of cells remains, but the lines of distribution of their conquerors. Another destroyer of bacilli is the serum of certain animals, such as the rabbit, though the evidence of this bactericidal action is by no means so complete as that of phagocytosis; for, though it has been demonstrated in test-tube experiments, the effects are much less marked in the experiments on living animals, and especially if the microbes have been closed in capsules of filter paper so that they may be acted on by the serum alone without the interference of the phagocytes, for most of the serum used for inoculation contains phagocytes. Metchnikoff thinks that the serum, though incapable of killing microbes, may dilute and destroy their toxins or poisonous secretions. A third method of destruction of the tubercle bacilli is to be seen in the process of fibrosis so largely present in chronic phthisis, though we must remember that the giant cells, which Metchnikoff claims as a form of phagocyte, often become converted into fibroid tissue, as Hamilton has well shown. In a lung from a case of fibroid phthisis there generally exists a dense fibroid tissue where all alveolar structure has disappeared, enclosing a few caseous nodules in which some tubercle bacilli may possibly be detected; but the fibroid tissue may be searched through and through for them, and always with a negative result. The striking way in which, after fibrosis has affected the walls of a cavity, the bacilli disappear from the tissue has been often noted by myself and others, and the inevitable conclusion seems to be that fibrosis is incompatible with bacillary life.

Such are the weapons used by nature to fight the battle of existence against so formidable an invader as the tubercle bacillus. In a well-organized, well-developed, and, therefore, well-protected individual, the bacilli are overwhelmed by the afflux of phagocytes at the point of entry, and immunity is the result. In one of less defective power they may enter and be carried along by the lymphatics to the lymphatic glands where they undergo digestion and destruction, for Hankin's researches have shown the secretions of these glands to have distinctly bactericidal properties. When, however, the tubercle bacilli gain an entrance and settle, and destroy the tissues, as in the case of the lung, the most that can be hoped for is either that the progress may be obstructed by fibrous growth—a truly pathological process—or that, through developing and expanding the healthy, though often by no means adequately developed, lung in the neighborhood, pressure may be brought to bear on the diseased portion, inducing a drying process incompatible with bacillary life. This process is encouraged by living at high altitudes.

Reflecting on the above sketch of the elements of defence against tuberculous attack, it would seem that the problem of treatment resolves itself principally into means to increase the number and activity of the phagocytes, and thus render more probable the destruction of the tubercle bacilli. Moreover, whatever improves the quality of these phagocytes would also improve and enrich the blood and lymph serum, of which they form a principal part. The third factor, fibrosis of the lung, supervenes in a large proportion of cases, but it is difficult to say its growth is promoted ; my impression is that the breaking down of lung tissue and the rapid evacuations of tuberculous material from that organ hasten its spread. To this conclusion I was led by careful examination of the Koch treatment cases, where tuberculous masses broke down and were evacuated more rapidly than is the rule in chronic phthisis and lung fibrosis, causing contraction of the thoracic walls, and displacement of organs supervened. Besides this problem, there is another which it is desirable to keep in view. While the use of purely bactericidal agents is not urged, partly on account of their inefficiency and partly because they sometimes injure the patient, there is no reason why we should not surround the patient with those natural agencies which have been shown to be highly unfavorable to bacterial life. These are sunlight and fresh air. Ransome and Delépine's* experiments on the conditions which modify the virulence of the tubercle bacillus showed that this virulence was reduced by exposure to daylight and fresh air, and was rapidly lost. But, to return to the first problem, How can we promote the formation of lymph and of blood rich in leucocytes ? All experience teaches that a large quantity of oleaginous food, supplied under

* Proceedings of the Royal Society, vol. lvi.

conditions which promote its absorption and assimilation, is the surest method, and among this class cod-liver oil is pre-eminent on account of its penetrative power and the ease with which, with pancreatic juice, it forms a rich emulsion capable of absorption. It is probably this which has caused cod-liver oil to do so much good in the treatment of phthisis ; and, when we reflect on the number of poor phthisical patients, as seen in the out-patient departments of hospitals, who enjoy no advantages of climate, whose surroundings are the reverse of sanitary, whose food is scanty, and whose trade or occupation is by no means salubrious, who yet hold their own by steadily persevering for months and years with cod-liver oil, it must be admitted that it does, in some subtle way, supply the requisite nourishment and augment the resisting force of the system ; the diminution of the usual phthisical symptoms and the rapid gain of weight and strength confirm this. With regard to substitutes for cod-liver oil—and they are legion—I have given a fair trial to most of them, and have not yet found any at all comparable ; but the combination of the oil with the preparations of hypophosphites and preparations of phosphorus and arsenic have proved very useful. The introduction of a large amount of milk into the dietary is to be aimed at. If cow's milk, however, fails, ass's and goat's milk should be tried, which are more easily assimilable ; or, if these are not available, by peptonizing or preparing cow's milk it is rendered more easily digested. In some cases koumiss and kéfir will—for a time, at any rate—supply the patient with what is required. It is a curious fact that, although wasting is the leading feature of this affection, there are few patients who so readily gain weight as phthisical subjects, when secured from over-exertion and supplied with appropriate food. At the Hospital for Consumption and Diseases of the Chest, Brompton, it is no rare occurrence to see patients suffering from acute and advancing tuberculous disease, characterized by high afternoon temperatures, nevertheless gain weight owing to the large amount of suitable food taken. In phthisis, gain of weight is by no means incompatible with progress of disease ; all it signifies is maintenance of appetite and the avoidance of exertion. But the most important factor in the system of treatment is pure air, and on its thorough application to the system of the patient most success depends. Sunshine and pure air are the best bacillicides. It must not be forgotten that it was the indoor occupations, like those of milliners, dressmakers, and tailors, formerly carried on in crowded, unventilated rooms, which furnished the largest number of cases of phthisis. On the other hand, the wild tribes of the desert, living in tents like the Arabs, are exempt from the disease ; but it was noted that, when these were confined in French prisons, they died of phthisis at the rate of fifty per cent.

Now, in this country, though there is a great deal of talk about the virtue of fresh air, and boasting of going out in all weathers, in the case of invalids the doctrine of MacCormack and Henry Bennet is not carried out as thoroughly as it ought to be. A leaf might, with advantage, be taken out of the book of some of our Continental friends, and fearlessly trust phthysical patients to a little more open-air life than is at present done. Undoubtedly the treacherous climate of the British Isles, especially in winter and spring, is the great excuse. At most English health stations a wet or snowy day means confinement to the house, and generally to the fireside, for the whole twenty-four hours, the usual plea being the great tendency of phthysical patients to catch cold and contract fresh catarrh. When what goes on at Davos, St. Moritz, and Falkenstein is taken into consideration, the probability of catching cold, if ordinary precautions are taken, is very doubtful. At Davos and St. Moritz phthysical patients almost invariably sleep with open windows throughout the winter, when the thermometer not uncommonly registers 4°F., or 36° below the freezing point, care, of course, being taken to heat the rooms with stoves, to provide plenty of blankets and coverlets, and to see that the current of external air is not directed on to the patient, but always first ascends to the ceiling. The universal testimony of medical men is to the effect that no harm, and much good, results from this practice. One effect is that patients accustom themselves to live at a lower temperature without noticing it. I remember a talented literary friend of mine who used to sit, sleep, and compose at Davos in a house of which the temperature did not exceed 40°, whilst his healthy, but unhappy, guest was sitting shivering at his side. A female patient at Davos in winter astonished me by undressing with the window open, snow lying deep on the ground at the time. I shut the window, which, I was informed, had been open for six weeks, and without harm. But it is to the practice carried on by day at the sanatoria at Davos, Ley sin, and Falkenstein that I would specially draw attention. At each of these places there are covered terraces, or long, sheltered corridors, open on one side to the air and protected from wind, where a large number of phthysical patients, in various stages of disease, recline on couches for the greater part of the day in all weathers. These galleries are deep and lofty, sheltered from too much sun, and from rain and snow by curtains. The patients lie on well-cushioned basket work or bamboo couches, like the Japanese ones used at the Hospital for Consumption and Diseases of the Chest, Brompton, for from seven to ten hours daily, only leaving them for meals or exercise. In the winter there is no heating apparatus, and warmth is kept up by fur clothing and abundant covering. At Falkenstein, on the slopes of the Taunus, about 460 feet above sea level, this seems to be sufficient, and during a recent visit Dr. Hess, Dr. Dettweiler's

assistant, informed me that hot bottles were rarely called for, but at Davos, where the temperature falls to 15° below freezing point in the shade, they are frequently needed. The galleries generally face south, and are at Falkenstein, from their horseshoe distribution, complete sun traps on bright days, and here the invalids recline in all weathers, for they are not allowed to sit up, it being found more difficult to keep them warm in the sitting than in the recumbent position. Several of them told me that they felt the cold at first, but soon got accustomed to it, and what they did dread were the white mists that prevail in autumn. Besides these terraces at Falkenstein there are a number of pavilions in the park-like gardens, some holding two or four invalids, which rotate so as always to ensure protection from wind and rain. The patients seem quite at their ease, and may be seen reading, writing, knitting, playing cards and games all day. They can keep warm even at Davos, as I can testify, having visited Dr. Turban's sanatorium on a hard, frosty day in January, 1892, and purposely shaken hands with a number of invalids as they lay on their couches after sunset reading their books by lamplight. Their circulation seemed to be excellent. In these sanatoria this treatment is by no means confined to incipient cases or to those with limited lesions, but is ordered even to patients in a condition of great prostration, and to well-marked pyrexial cases. Dettweiler holds that the open-air treatment is the best method of treating the pyrexia or phthisis, and his plan is as follows: After keeping a case of this kind in bed for a week, under diaphoretics and antipyretics, with cold water applications and dry rubbings, if the pyrexia does not abate the patient is placed under the open-air treatment, and this has the effect of gradually reducing the fever and improving the appetite and strength. The open-air treatment has been largely in vogue in Germany since the Franco-German war, when the treatment of fever and of surgical cases in tents, and in more or less open sheds, was found to be so satisfactory, and most of the new German and Swiss hospitals have covered balconies or galleries adjoining the wards, where the patients can be wheeled, and where they can lie in the open air for most of the day. The same is done in some of our English hospitals if, as at St. Thomas' Hospital, the construction admits of it.

The advantages of this treatment for those suffering from phthisis are obvious, as it means the complete application of the finest antiseptic in the world—fresh air—to the lungs and systems for most of the day; but the objections are twofold. The recumbent position is not the best for expectoration, and where there are cavities, and the power to expectorate is feeble, there is some risk of fresh lung infection and the promotion of secondary cavities. This is met by adopting a position in which the head and shoulders are more or less raised, as is possible with most of the

bamboo couches. Again, there are the want of exercise and the tendency to chilliness which such a practice involves. This is a point on which I differ from our German confrères, for, while they dwell on the importance of air, they do not attach sufficient importance to exercise, even in the initial lesions of phthisis. For the cases of consolidation or of excavation with pyrexia exercise is undesirable, and a continuously recumbent position the best ; but in cases of limited apical lesions and limited cavities without fever, it is desirable for the patient to take as much exercise as his strength will permit in order to develop and extend the healthy portions of the lung, and to increase the muscular power. This, however, need not prevent the patient from spending the resting times of the day in the recumbent position in the open air. Then the difficulty of carrying out this practice in London and Birmingham, and other great cities, is considerable on account of the smoke, and, in winter and autumn, of the fogs ; but there is no reason why it should not be tried more fully at our health resorts, like Ventnor and Bournemouth, Torquay and Hastings. The south coast sanatoria of England should, as Dr. Herman Weber suggests, have covered terraces or balconies in which patients might lie on couches ; and in the numerous villa gardens of Bournemouth and Torquay convenient rotatory shelters, capable of being turned at will to keep out wind and rain, might be erected and the verandas be more utilized.

And now I would close with a few remarks on treatment, suggested by thirty years' experience of the disease. Cough should always be treated by promoting expectoration, one of the best forms of expectorant being the effervescing carbonate of ammonia draught night and morning, which will generally clear the bronchial passage for several hours. If there be a good deal of fruitless hacking before expectoration, causing annoyance to the patient, the addition of a few minims of dilute hydrocyanic acid and half a drachm of syrup of poppy or codeia will do no harm, and considerably allay the reflex irritation. Where the cavities are large, or deep, or basic, and consequently require great expiratory effort to clear, combinations of sal volatile and spirit of ether with camphor water, as in the form of the pharmacopœia of the Brompton Hospital, answer admirably, while for old or feeble persons champagne will often serve the same purpose. But the most satisfactory way to reduce the cough of chronic phthisis is by counter-irritation to the chest wall—best by blistering. It will be found that relief will follow in proportion to the amount of serum drawn by vesication, and fly blisters or acetum cantharidis, or the strong but very efficient liquor epispasticus, answer the purpose. Night sweats, when they are a mere flux from the vessels or lymphatics, and not a relief of pyrexial processes, ought to be checked, and this can generally be done by arse

niate of iron, $\frac{1}{6}$ gr. to $\frac{1}{3}$ gr., at bedtime, or picrotoxine, $\frac{1}{60}$ gr. to $\frac{1}{30}$ gr., or nitrate of pilocarpine, $\frac{1}{20}$ gr., or the old-fashioned oxide of zinc in from 3 gr. to 5 gr. doses, which generally succeed and do no harm. Preparations of belladonna and atropine, though they are effectual controllers of night sweats, are less satisfactory, because their continuance for a long period often induces dryness of throat and mouth, dilatation of the pupils, and disturbance of sight accommodation. The treatment of pyrexia depends very much on its cause. Where it accompanies tuberculization it will probably subside of itself when the tuberculous process quiesces, and even if persistent will only prevail in the afternoon. An effervescing saline, with a few drops of tincture of aconite or a few grains of quinine, is all that is then wanted. But pyrexia accompanying acute excavation, or acute excavation and tuberculization, is very troublesome, and sometimes quite intractable. Antipyretics, of which there are any number, according to my experience, only give temporary relief, and often do harm by depressing the patient's constitutional powers and producing collapse. I have seen the temperature depressed from pyrexia to a subnormal reading by doses of antipyrin or phenacetin, but always with bad results, and after the use of the medicine has been omitted the temperature has risen as high as ever before. The great object in the treatment of this form of pyrexia is to keep the patient quiet in bed or lying on a couch, and, if possible, in the open air, *à la* Dettweiler; to feed him frequently; and to supply alcohol to repair tissue waste, while administering only sufficient antipyretics to keep the temperature within moderate bounds. Quinine in small doses in effervescence before the rise or during the rise of temperature will often suffice, or Henn's well-known pill twice a day. Any one who studies the phenomena of fever knows that temperature rise is only a small portion of the process, and that by lowering the chart we do not get rid of the factors of heat production or of the wear and tear of the tissues, and so our best line is rather to keep up strength and weight by a frequent supply of food. The diarrhœa which accompanies tuberculous ulceration may be checked by sulphate of copper and opium if the ulcerative process be limited in extent, but if there is much ulceration, and it is the ileum and large intestine which are involved, injections are best. The enema opii of the British Pharmacopœia is excellent under these conditions, but I have seen a few of the most obstinate cases yield to large injections of linseed tea, which has a most soothing influence on the irritable ulcers.

Clinical Notes.

FRIEDREICH'S DISEASE.

BY D. CAMPBELL MEYERS,
TORONTO.

Mr. President and Gentlemen:

AS pathological specimens of Friedreich's disease are still comparatively uncommon, I take the opportunity of exhibiting to those interested a microscopical section of the spinal cord of a patient who had suffered from this disease.

In this section I would like to direct attention more especially to the posterior columns, which clearly show that peculiar form of sclerosis which has been described by Déjérine as a pure neuroglial sclerosis.

On examining these posterior columns, and especially the median parts of the columns of Goll with a high power, there is found a peculiar arrangement of the fibrillæ, which cross one another in various directions, or run closely beside one another, in sinuous curves.

These fibrillæ are exceedingly fine, and are for the most part directed horizontally. Since some, however, have an irregular course, and since they arise at different levels, they are seen in the section to be cut transversely or obliquely.

The vessels show no appreciable thickening of their walls, and no processes of the pia mater are found hypertrophied. The difference between the condition just mentioned and that met with in ordinary *tabes dorsalis* is very marked and exceedingly interesting.

We know from the works of Renaut, which have since been fully confirmed by Ranvier, that the neuroglia is not derived from the mesoblast, as is the ordinary connective tissue, but from the outer layer of the blastoderm, the epiblast.

In this fact we have an important difference between the sclerosis of the posterior columns in Friedreich's disease and the other scleroses, since the former is the only sclerosis which is congenital, and it can consequently be more easily attributed to an alteration in development.

Further, the histo-chemical reactions of this new tissue, as shown by the test of Malassez, is distinctly different from that of any other connective issue.

In conclusion, I may add that a consideration of the above facts would indicate that the sclerosis of the posterior columns, at least in Friedreich's disease, is not the same as that found in ordinary tabes, contrary to the opinion generally held by authors, that we have in the former disease to do with a special form of sclerosis distinctly different from that usually met with, which is due to a defect in development, and in which the neuroglial elements only are concerned.

This specimen is further interesting since the appearance and histo-chemical reactions of the tissue above described are precisely analogous to those discovered by Chaslin in the brain in certain cases of idiopathic epilepsy.

MALIGNANT DISEASE, INVOLVING THE ABDOMINAL AND
PELVIC LYMPHATIC GLANDS AND INTESTINE,
WITH SECONDARY LESIONS.*

BY H. B. ANDERSON, M D.,

TORONTO.

ALEX. S., æt. 65, gardener, admitted into Toronto General Hospital, September 30th, died November 17th, 1893.

Until three months before entering the hospital the patient had been in good health. He then began to fail rapidly, losing fifty pounds weight in three months. At intervals he complained of ill-defined abdominal pains and some tenderness, but these symptoms were not marked. He had no symptoms particularly referable to the alimentary tract. On entering the hospital, the patient showed marked anæmia, wasting, and cachexia. On examination a distinct lump was felt in the right inguinal region, and nodular masses of varying size throughout the abdomen. Nothing else was revealed on physical examination of the various organs.

After entering the hospital, the patient was troubled with constipation, requiring purgatives. He grew gradually weaker, and died November 17th, after four and a half months' illness. There was no history of tumors in his family.

The post-mortem examination showed as follows: On opening the abdominal cavity, there was evidence of chronic inflammation, about a quart of turbid fluid, containing masses of fibrin, being removed from the peritoneal cavity. The peritoneum, both parietal and visceral, was much thickened and covered with fibrinous deposit. On continuing the examination, attention was at once attracted to the mesenteric glands, which were enormously enlarged, so that by their overgrowth and coalescence they formed one nodular mass. The intestines were almost inseparably bound together by inflammatory adhesions and extension of the growth from the glands.

The glands varied in size from a hen's egg (small) to a marble. The larger ones on section were white in color and brain-like in consistence, the softening being most marked in the centre. On pressure, they exuded a whitish juice. The smaller glands were yellowish white and firm, and

* Read before the Toronto Pathological Society.

exuded very little juice. The enlargement and softening had advanced to greatest extent in the glands in the upper part of the mesentery. The retroperitoneal glands were also greatly enlarged, and some of them were softened, although to a lesser degree than the mesenteric. They formed a mass surrounding the aorta and vena cava. Some of the pelvic glands were also enlarged.

The various organs were as follows :

Spleen. Weight five and a half ounces, showed no gross lesion.

Kidneys. The upper one-third of the left kidney was occupied by a soft, reddish-gray mass, apparently mostly blood clot. Right kidney was normal.

Liver was apparently normal, but, unfortunately, it was not saved. Suprarenals were not saved.

Intestines were so matted together that it was with the greatest difficulty any separation could be effected. In the upper part of the jejunum an ulcerated surface four inches long was found. The whole wall of the gut was involved, the edges and floor of the ulcer being ragged and thickened. The wall of the intestine adjacent to the ulcer was uniformly thickened to about three-eighths of an inch, but it preserved the general form of the gut, the growth being, as it were, moulded on the intestine ; and it presented no ulceration. Lower down in the ileum a similar but smaller ulcer was found. In the cæcum the outer coats were eroded by the growth, but the mucous membrane remained intact. The appendix was much thickened.

Duodenum, stomach, and œsophagus, normal.

Pancreas, normal.

Lungs. Right lung showed no gross lesion. The left lung presented along the base inferior and anterior borders, just beneath the pleura, a number of small, flat, superficial, yellowish nodules. The bronchial glands were not enlarged. There was no enlargement of the cervical axillary, mediastinal or inguinal glands, nor of the tonsils. Peyer's patches and the solitary glands away from the intestinal lesions were not materially enlarged. Testicle showed no lesion.

Heart. Showed nothing worthy of remark.

Brain and cord. Not examined.

Microscopic examination. (1) The enlarged glands consist mostly of irregularly-rounded cells larger than leucocytes, separated by a considerable amount of stroma. Besides these there are also a considerable number of spindle cells with elongated nuclei separated by smaller round cells in different parts of the section. Masses of deeply staining round cells, resembling leucocytes, are also seen in the growth, and there are areas of necrotic tissue, unstained. The section shows a considerable amount of fatty change.

(2) Intestine at edge of ulcer. The normal histological structures are replaced by a cellular structure essentially the same as that described in the gland. In the outer part of the wall it shows some larger flat epitheloid cells lying in a fibrous tissue stroma. The necrotic area is here along the edge of the ulcer, and the fatty changes are less marked. At one place it shows where the growth is encroaching on the outer edge of the gut, involving its peritoneal coat. The growth here exhibits a high degree of vascularity.

(3) Intestine away from edge of ulcer. Here the normal structures are, to a large extent, replaced by the same cellular growth. At some places columns of the circular muscular fibres remain. At others they are separated by columns of the infiltrating cells, until at last the muscle is gradually replaced by the cellular growth.

(4) Appendix. The thickening is found to be due to the round cells which replace the outer coats. Beneath the mucous membrane is a layer of small round cells like leucocytes.

(5) Lung. The nodules here are essentially the same in structure as the growth in either parts, consisting of a very vascular cellular structure.

(6) The mass in the kidney consists of small round cells massed in different places, and a large amount of fibrinous material. It also shows considerable amount of brownish yellow blood (?) pigment.

(7) Spleen shows nothing abnormal.

There was no microscopic examination of the blood, so I am unable to state the relative proportion of corpuscles in it.

As to the exact nature of the morbid condition affecting the various organs and structures mentioned, I am in some doubt. It was certainly very malignant in character, causing secondary lesions, and death in about four months' time.

It appears to have been a malignant growth, attacking simultaneously the mesenteric and retroperitoneal glands. The condition in the intestine may have been due to a direct extension and infiltration from the glands, or there may have been a primary overgrowth of the adenoid tissue of the gut itself; or, for reasons to be mentioned, I think that the intestine was probably involved in both ways. There was visible evidence, both gross and microscopic, of the extension of the growth from the glands to the *outer* coats of the intestine, which were much thickened and infiltrated, and in one place showed ulceration, the *mucous* coat in the same part remaining intact. In the appendix the outer coats were involved to the greatest extent. On the other hand, the bowel in two places showed ulceration on the *mucous* surface, the *outer* coats being involved to a much lesser degree.

The enlarged retroperitoneal glands surrounded the aorta and inferior vena cava, and in one place the growth extended through the wall into the lumen of quite a large tributary to the inferior vena cava. This would easily account for the secondary growth in the lung. The growth in the kidney may have been due to extension along the blood vessels, although I could find no direct evidence of this. It was remarkable that, although the intestines and mesentery and their glands were involved to such an extent, no secondary growths were found in the liver or spleen.

For the following reasons I think the primary lesion was in the glands, or, at least, simultaneous with the involvement of the intestine :

(1) It was here that the morbid condition had reached its most advanced stage; many glands already softened and partly broken down.

(2) The general involvement of the glands—mesenteric, retroperitoneal, and pelvic.

(3) There was an absence of all early clinical signs of involvement of the intestines.

In many respects the growth resembled malignant lymphoma, or Hodgkin's disease, a condition by many authorities—Coats, among others—considered as being identical with a lympho-sarcoma. It, however, presented the following differences from Hodgkin's disease, as ordinarily described :

(1) The liver was not enlarged.

(2) The spleen was not enlarged, and showed no microscopic evidence of being affected.

(3) Many of the cells were larger than those found in lymphadenoma.

(4) We do not find infiltration of the surrounding tissues and coalescence of the glands in Hodgkin's disease, (Hamilton.)

(5) The patient was older, and the disease ran a more rapid course than is ordinarily the case.

Hamilton distinguishes lympho-sarcoma from lymphadenoma, and this tumor more nearly corresponds to his description of the former : "A tumor, in structure somewhat resembling a lymphatic gland, usually commencing in and involving several members of a group almost simultaneously. These enlarge and coalesce, so that the original outlines of the individual glands are lost." Bland Sutton, who also distinguishes between the lympho-sarcoma and Hodgkin's disease, places the former as the most malignant of all forms of sarcoma. This quite agrees with the clinical history of the present case.

None of these descriptions of lympho-sarcoma, however, account for the intestinal involvement. Coats, under the heading of malignant lymphoma, or Hodgkin's disease, describes a case which quite corresponds

with the one under discussion, "in which a considerable length of small intestine was replaced by tumor tissue, the general form, including the valvulæ conniventes, being repeated in an exaggerated form."

To some it might appear that the case was one of tubercular enlargement of the glands, but the following considerations disprove this :

- (1) There was no tubercular history.
- (2) There was no caseation.
- (3) The growth was not in the form of tuberculous nodules, and it showed no microscopic characters of tubercle.
- (4) It was too malignant in its clinical history to be tubercle.
- (5) There were no tubercle bacilli.

I submit for your examination microscopic specimens of the growth in various organs.

Progress of Medicine.

MEDICINE

IN CHARGE OF

J. E. GRAHAM, M.D., M.R.C.P. Lond.,

Professor of Medicine and Clinical Medicine, University of Toronto; Physician to the
Toronto General Hospital, and St. Michael's Hospital;

AND

W. P. CAVEN, M.B., Tor.

Lecturer in Clinical Medicine in the University of Toronto; Physician to
Home for Incurables.

HÆMATOPORPHYRIN (AND SOME OTHER ALLIED BODIES) IN THE URINE.

The discovery of hæmatoporphyrin in the urine is not only of high physiological interest, but has acquired the greatest degree of practical importance because of the suspicion that the worst cases of hæmatoporphyrinuria may be due to the free use of sulphonal.

When hæmatin is heated with concentrated sulphuric acid it dissolves, and the filtrate is a clear and beautiful purple red fluid. If a large excess of water be added to the filtrate, a brown flocculent precipitate, devoid of iron, is thrown down, and is still further increased if alkalies be added in such quantity as to neutralize the acid. This substance was first prepared by Mulder, in 1844, and was named by him iron-free hæmatin. It was found by Hoppe-Seyler to be a mixture, the main constituent of which he called hæmatoporphyrin, while to a substance present in smaller amount he gave the name hæmatolin. To the latter he ascribed the provisional formula $C_{68}H_{78}N_8O_7$; and to hæmatoporphyrin the formula $C_{68}H_{74}N_8O_{12}$.

HÆMATOPORPHYRIN IN URINE.

The first to call attention to the presence of hæmatoporphyrin in the urine and its distribution in nature was MacMunn, who, in 1880, discovered a pigment in the urine of a case of rheumatic fever, to which he gave the name of urohæmatin. This name he afterwards (1885) discarded for that of urohæmatoporphyrin, because the urinary pigment "bears a very striking resemblance to hæmatoporphyrin, as can be seen by comparing the spectra of its

alkaline and acid alcoholic solutions with similar solutions of hæmatoporphyrin." It is, indeed, true that a Burgundy-red urine from a case of leprosy was examined by F. Baumstark in 1874, and yielded two pigments, one of which was free from iron. But neither of these pigments was genuine hæmatoporphyrin, although probably allies of it. The case is full of interest, and will be referred to in the sequel.

The following are some of the diseases in which hæmatoporphyrin has been detected—not, indeed, as an invariable constituent of the urine, but frequently: Gout, acute and subacute rheumatism, chorea, tubercular affections, lobar pneumonia, pleurisy, cirrhosis of the liver, enteric fever, erythema nodosum, febricula, measles, tonsillitis, parametritis, hysteria, chlorosis, Raynaud's disease, Addison's disease, exophthalmic goitre, Hodgkin's disease, catarrhal jaundice, paroxysmal hæmoglobinuria, lead poisoning, heart diseases, broncho-pneumonia. Of more interest, perhaps, is the occasional discovery of it, in small amount, in the urine of healthy persons. Salkowski did not succeed in finding it in healthy urines, although he estimated that by his method he could detect as little as .035 per mille in urine; but Garrod detected it frequently.—John Priestley, M.R.C.S., in *Medical Chronicle*.

ACNE ROSACÆ.

Dr. Purdon, of Belfast (*Dublin Journal Medical Science*, May, 1894, p. 402), advocates the following plan of treatment in acne rosacæ. The dietary and any gastric derangement having been attended to, the following local plan gives good results: Bathe affected parts with spirits of horse-radish, say, in the morning; and, at bedtime, rub in pretty firmly a pomade of sulphur with a small quantity of carbolic acid. In place of the latter, sometimes good results are obtained by substituting 10 grs. of the green iodide of mercury to the ounce. All comedones should be squeezed out with an "extractor." As a "reducing" agent ichthyol is often better than sulphur.—*Medical Chronicle*.

THE INFLUENCE OF THE LIVER IN THE DEVELOPMENT OF PANCREATIC DIABETES.

Although we have learned that certain lesions of the central nervous system and destructive changes in the pancreas respectively are attended with glycosuria, the etiology and pathology of diabetes mellitus are yet unexplained. Whatever the chemic and metabolic changes upon which the excretion of sugar in the urine depends, there is evidence that no small part in the morbid process is played by the liver, of whose multiplicity of function we really know comparatively little. There is good

reason for believing that under normal conditions the liver either stores up or converts into other bodies a substance allied to sugar, and which, under certain morbid conditions, appears in the urine as glucose. Additional evidence of this influence of the liver in the development of diabetes is furnished by the results of some experiments detailed at a recent meeting of the Berlin Physiological Society by Marcuse (*Munchener medicinische Wochenschrift*, 1894, No. 28, p. 564), who undertook to determine if the diabetes that appears after extirpation of the pancreas manifests itself in case the liver is also removed. As the animals experimented with were likely to die sooner in consequence of the two operations than after extirpation of the pancreas alone, the question arose as to whether or not the animals would live long enough to afford time for the development of the diabetes. To decide this point, a series of observations were made upon nineteen frogs. It was found that in twelve of these in which diabetes developed this appeared within the first day or two, the animals living on an average for five days. The proportion of sugar contained in the urine, as determined by polarization, equalled 0.4 per cent. In a second series of almost parallel cases, both liver and pancreas were removed, with the result that in not one of the animals did diabetes develop. These animals lived for from one to five days after the operation. The amount of urine excreted was considerable, though not so great as in the case of the animals from which only the pancreas had been removed. In explanation of the influence of the liver in the development of the diabetes that follows removal of the pancreas, it is suggested that there is formed in the liver a substance that, while not itself sugar, is yet of importance in the development of diabetes (perhaps a sugar-forming ferment), or that certain elements in the blood that are acted upon by the liver remain in the circulation after extirpation of this organ, and bring about decomposition of the sugar present after extirpation of the pancreas.—*Medical News*.

OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

Professor of Obstetrics in the University of Toronto; Obstetrician to
the Toronto General Hospital.

ASSISTED BY

H. CRAWFORD SCADDING, M.D.,

Physician to Victoria Hospital for Sick Children.

HYDRORRHŒA GRAVIDARUM.

Chazan (*Centralblatt für Gynakologie*) discusses the causes of hydrorrhœa gravidarum. Although this condition has been long known, yet its nature and causation are still uncertain. It seems a symptom of several conditions; and may come from several sources. In some cases there is a true serous infiltration of the uterine wall, the fluid collecting between it and the membranes. In other cases the decidua is the source, in others the infolded surfaces of the decidua vera and reflexa. Sometimes it seems due to a persistence of the allantoic sac. The author cites an interesting case of a healthy primipara, aged twenty-three years, who consulted him on account of excessive thirst, weakness, and breathlessness. The excessive distension of the abdomen, out of all proportion to the period of pregnancy, caused a diagnosis of hydramnios. Some time after the patient was seized with severe pains in the body and back, and, on examination, showed the beginning of regular uterine contractions. The pains became more intense until the following day, when a profuse watery discharge occurred from the uterus, causing it to become markedly reduced in size. The pains then slowly disappeared, and a period of rest, except for backache, ensued for several weeks, when there was a recurrence of the phenomena, with another period of rest. After the last period a lesser recurrence took place, the os dilated to the size of a dollar, the presenting head settled well into the pelvis, when another period of rest occurred.

Finally, nearly three months from the time of the first attack, the pains recurred, with a small discharge of water, followed by the birth of a healthy female child. An examination of the placenta showed the ovular envelopes scanty, the amnion extensively separated from the chorion. Besides the opening through which the fœtus passed, the amnion showed

in its separated part a hole the size of a quarter, this hole having slightly swollen edges.

The author considers that this case shows that the amniotic cavity may be the source of an outflow, and the question arises whether in cases of fluid escaping from this cavity it may not escape from an opening in the upper pole due to variations in coherence, caused by changes in the shape of the lower uterine segment incident to the later months of pregnancy, or whether it can escape through an aperture in the lower pole of the ovum during pregnancy without interrupting the course of the latter. The writer is inclined to admit this latter as possible. In twin pregnancy a second child may come very late after the first, which proves that a partial emptying of the uterus does not of necessity involve the immediate contraction.—*American Journal of the Medical Sciences.*

ECTOPIC GESTATION.*

Dr. Webster, of the University of Edinburgh, gives the following classification of ectopic gestation (*American Journal of Obstetrics*, August, 1894) :

Primary tubal in all cases as far as is known.

I. AMPULLAR, in which the gestation begins in the ampulla of the tube. This is by far the most common origin.

1. *Persistent.* In rare instances the tubal gestation may go on to full time.

2. *Rupture may take place early into the broad ligament*—subperitoneo-pelvic, tubo-ligamentous, extra-peritoneal, broad-ligament, gestation.

(1) The gestation may continue to develop—subperitoneo-abdominal.

(2) A secondary rupture of subperitoneo-pelvic gestation may take place into the peritoneal cavity.

(3) The gestation may come to an end :

(a) By the formation of a hæmatoma.

(b) By suppuration.

(c) By mummification, adipocere, or lithopedion formation.

3. *Rupture may take place into the peritoneal cavity.*

(a) Tubo-peritoneal gestation, in which escape of the foetus in the membranes occurs into the peritoneal cavity, the placenta remaining in the tube, its development continuing.

(b) The gestation terminates in various ways : By the formation of a hæmatocele, the patient dying from the shock and loss of blood, or from peritonitis. In some cases absorption of the mass may occur. In others mummification, adipocere, or lithopedion formation may take place in the foetus. Or suppuration may result.

*I do not include cornual pregnancy in this table.

4. *The gestation may be destroyed :*

(a) By the formation of a tubal abortion and its passage through the fimbriated end of the tube into the peritoneal cavity.

(b) By the formation of a hæmatosalpinx.

(c) By the formation of a mole.

(d) By suppuration resulting in a pyosalpinx.

(e) By absorption after early death, by mummification, adipocere, or lithopedion formation.

II. INTERSTITIAL. The gestation may develop in the interstitial portion of the tube :

(1) The gestation may go on to full time.

(2) Rupture of the gestation into the peritoneal cavity may occur.

(3) Rupture into the uterine cavity may occur.

(4) Rupture both into the uterine and peritoneal cavities may occur.

(5) Rupture may occur between the layers of the broad ligament.

(6) After the death of the foetus it may remain in its sac, and possibly may undergo the same changes as in the other forms, *e.g.*, mummification, adipocere, or lithopedion.

III. INFUNDIBULAR. The gestation begins in the outer end of the tube, or in an accessory tube ending. Under this heading are to be included the forms described as tubo-ovarian, and tubo-abdominal, names which appear to me to be unnecessary, since the gestation is a tubal one in origin, the end of the gestation sac merely becoming adherent to the abdominal wall, the ovary, or other of the viscera.

SURGERY

IN CHARGE OF

L. M. SWEETNAM, M.D. Tor.,

Lecturer on Therapeutics in the Woman's Medical College; Surgeon to the Outdoor Clinic, Toronto General Hospital; Surgeon to St. Michael's Hospital;

AND

A. PRIMROSE, M.B., C.M. Edin.,

Associate Professor and Demonstrator of Anatomy, University of Toronto; Surgeon Outdoor Department, Toronto General Hospital; Surgeon, Victoria Hospital for Sick Children.

CASE OF INTESTINAL OBSTRUCTION DUE TO ADHESIONS ROUND THE VERMIFORM APPENDIX, THE RESULT OF APPENDICITIS THREE YEARS BEFORE.

Mr. Jones, in *Medical Chronicle*, August, 1894, reports the following case:

On March 17th of this year the patient (John H., æt. 20) was seized with pain in his abdomen, felt mostly below and to the left of the umbilicus. He was constipated. He took to his bed, and a doctor was called in, who gave him an enema of hot water and turpentine. This brought nothing away. Nine similar enemata were given during the ensuing week, and on one occasion a hard fæcal mass was brought away by the injection. But for this, there was complete constipation; but the patient thinks that he passed some flatus.

On the evening of the 21st patient began to vomit. He describes the vomit as being "reddish" at first, and he noticed no special odor about it, but next day it became brownish, and had a distinct fæcal odor. The abdomen gradually became distended and the pain increased, and he was sent to the Manchester Infirmary. On admission patient was found to be suffering from constipation, fæcal vomiting, and severe abdominal pain. His face was pinched, and had the anxious expression found in abdominal cases. The abdomen was greatly distended, chiefly in the middle, the flanks being unaffected.

Patient stated that he had had an attack of typhoid fever in November, 1890, which kept him in bed for three months. During this attack he had no diarrhœa, but, on the contrary, constipation. He remembered no other illness.

On examining the abdomen, Mr. Jones thought he felt resistance in the right iliac fossa, and, though the pain was not in this region, he determined to open the abdomen here and explore.

Operation, March 24th. Chloroform was given, and a small, hard mass could be felt in the right iliac fossa. An incision, about three inches long, was made in the right linea semilunaris, and the peritoneum was cut through. Adhesions, apparently of long standing, were found round the cæcum. The appendix was as thick as an average-sized finger, and more than four inches long. It dipped into the pelvis, and its extremity was there adherent, causing occlusion of the gut by dragging on it. The adhesions were separated, and about two inches of the appendix were removed. The stump was ligatured, and its peritoneum was stitched over it by means of three Lembert's sutures. The part was washed out with boracic lotion and thoroughly dried, and then the wound in the abdominal wall was closed with silk sutures, no drainage being used. Dry dressings were applied and the patient went back to bed. He made an uninterrupted recovery. The temperature never rose to 100° ; the pain and vomiting ceased. He was fed by the bowel, each enema containing, for the first day or two, a little liq. opii. sedative. The bowels acted naturally on the fifth day after the operation. On April 20th patient was allowed out of bed, and on the 24th he left the hospital. He has been seen twice since, and has continued quite well.

From what was found at the operation, it seems likely that the illness that patient had in 1890 was not typhoid fever, but appendicitis. It is interesting to note that the pain was on the left side of the abdomen, and that McBurney's point was absent. For the notes of the case we are indebted to the dresser, Mr. Paget Moffatt.

[NOTE.—We republish the above case because its clinical aspects are so commonly met with. Many cases of so-called typhoid fever are, in reality, appendicitis. The diagnosis is frequently turned on the absence of McBurney's point, which is by no means a constant symptom. It is very frequently absent. Its presence is diagnostic, but its absence is not proof that appendicitis does not exist.]

GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

EDMUND E. KING, M.D., Tor., L.R.C.P., Lond.,

Surgeon to St. Michael's Hospital; Physician to House of Providence and Home for Incurables; Assistant Pathologist, Toronto General Hospital.

TWO CASES OF INTRAPERITONEAL RUPTURE OF THE BLADDER.

Coats records (*British Medical Journal*, 1894, No. 1751) two fatal cases of rupture of the urinary bladder, and adds the post-mortem records. In studying these cases the following points seemed especially worthy of comment:

The absence of a clinical diagnosis in both. There was no clear history of violence in either case, and the symptoms were obscured by the fact that one patient was maniacal and the other deeply intoxicated.

The seat and size of the rupture were similar in the two cases. The tear was found in the posterior wall of the bladder, a short distance from the fundus, being circular in the first case and transverse in the second.

The interval of time between the rupture and the death of the patient was in the first instance five days, and two to three days in the last. Of 85 cases collected by Rivington, 8 died within twenty-four hours; 15, within two days; 15, within three days; 16, within four days; 10, within five days; 4, within six days; 5, within seven days; 5, within eight days; 1, within nine days; whilst 1 lived twelve days; 1, more than twelve days; 1, fourteen days; 2, about fifteen days; and 1, sixteen clear days.

The absence of peritonitis was a surprise to the author, who states that none of the ordinary evidences of acute peritonitis were present.

Absence of inflammatory reaction in the wound was noted, particularly in the first case, even in the microscopic examination of the edge of the wound and adjacent bladder wall. Ferraton, in 1883, recorded two cases that received external wounds simultaneously with rupture of the bladder; he observed that at the time of death the wounds presented exactly the same aspect as at the time of admission to the hospital—"they presented no trace of a process of inflammation and repair."

The mode of death is directly related, in the opinion of the author, to the absorption of the urine by the peritoneum, and its continuous accumulation in the blood, to which condition Coats applies the term "urinary poisoning."—*American Journal of the Medical Sciences.*

NEPHRITIS FOLLOWING FRICTIONS WITH NAPHTHOL.

In the *Revue internationale de médecine et de chirurgie pratiques* for October 25th, there is an abstract of an article on this subject by M. Baatz which appeared in the *Centralblatt für innere Medizin*. The author relates two cases of nephritis following naphthol frictions for the itch. In the first case, that of a boy nine years old, the nephritis, which was not very pronounced, manifested itself in œdema of the legs, the feet, and the scrotum, accompanied with slight albuminuria. Recovery followed very quickly under the influence of a proper diet and baths. In the second case, that of a boy six years old, anasarca and symptoms of broncho-pneumonia were observed when he entered the hospital. The urine, which was brownish in color, contained albumin, hyaline casts, and red blood corpuscles. Notwithstanding the treatment, which was carefully applied as soon as the symptoms appeared, the situation became aggravated, and the child died four days after his entrance into the hospital. At the autopsy extensive broncho-pneumonia of the left base and parenchymatous nephritis were found. The author thinks that in both cases nephritis had been provoked by naphthol frictions. He recalls the fact that similar cases have been observed before by other authors. Kaposi has published an account of a boy who, after friction with naphthol for prurigo, was taken with ischuria, with bloody urine, vomiting, loss of consciousness, and eclampsia which persisted for several days. The child recovered. Lewier has related the case of a man who, after fifteen days of naphthol frictions, was taken with acute nephritis with albuminuria. Finally, Frohmüller has observed three cases of naphthol poisoning where the principal symptoms were acute nephritis and attacks of mania.

STONE IN THE BLADDER : CHOICE OF OPERATION.

William H. Hingston, M.D., of Montreal, in *Medical News*, says in regard to the choice of operation for stone in the bladder: "Lithotriize in all cases of adults in whom the stone is neither too large nor too hard for the lithotrite; when the urethra is or can be made sufficiently capacious for the crushing instrument; in children, however young, when the urethra permits the introduction of a crushing instrument. In very young children the cutting operation is preferable. The precise age at which lithotrixy is possible must vary with the calibre of the canal, which in young children varies greatly in its capaciousness and its capacity. When the urethra in the child is not and cannot be made fit to receive the lithotrite, the cutting operation to be chosen is the lateral method. In cases of stone in the aged, when enlarged prostate not only

prevents the stone being seized, but its dimensions being ascertained, one should act as if the calculus were of large size and incapable of reduction, and proceed to operate by the suprapubic method."

Surgical interference in cases of calculus in the female remains the same. The method employed years ago by Erichsen, Thompson, and others, has since been followed, and stones of large size are removed generally *per vias naturales*, after dilatation.

In exceptionally large calculi the lithotrite commonly suffices ; and rarely, indeed, is the surgeon obliged to resort to the knife in the case of females.

SUPRAPUBIC PROSTATECTOMY.

Robson (*British Medical Journal*, July 14, 1894) reports twelve cases of operation by this method. He considers this operation in properly selected cases one attended with less danger than is usually thought, and that if thoroughly and completely performed it is capable of affording such relief as may be in many instances genuinely termed a cure, and that in a class of cases which until a few years ago were looked on as incurable. As a method of diagnosis he strongly recommends bimanual examination. In regard to the selection of cases, whenever a patient has no large amount of residual urine, and can be made comfortable by the passage of a catheter at night or night and morning, and where catheterism is well borne and not difficult or distressing, operative treatment is unnecessary. In complete muscular atony, operation is advisable if the atony have existed only a short time ; months duration precludes successful operation. The presence of a large amount of residual urine associated with fair vesical contractility, and not diminishing after regular catheterism, if the patient is in a fair condition and is not sufficiently relieved, is a decided indication for prostatectomy. Cystitis associated with pain and irritation during catheterism is an indication for the operation, as is also the presence of calculi or calculous material. Contraindications are, advanced kidney disease, especially associated with greatly diminished secretion of urea ; chronic atony ; glycosuria ; well-marked degeneration of the blood vessels associated with general senile debility or other organic disease that would render any major operation unwise. In addition to external antisepsis and washing the bladder out with boric solution, the author advises five to ten grains of boric acid and a little saccharin thrice daily for a few days before the operation, so as to render the urine aseptic if possible. He introduces at most only four to six ounces into the rectal bag, in order not to over-distend the rectum and cause rupture or inflammation. The bladder is filled with boric lotion till it is felt above the pubes. The peritoneum can

usually be avoided; but when it must be cut into, it should be dissected up and sutured before the bladder is opened. McGill's scissors or Jessop's cutting ring-forceps are used to remove the portion of prostate desired. Suprapubic drainage has been found sufficient in all cases. In the after-treatment boric acid is given thrice daily, and the bladder is washed out by syringing a solution of boric acid through the urethra to the drainage opening. The drainage tube is removed on the third day, if possible, and the patient is allowed to sit up within a few days after the operation. Recovery follows without general disturbance.—*American Journal of the Medical Sciences.*

PÆDIATRICS AND ORTHOPÆDICS

IN CHARGE OF

W. B. THISTLE, M.D., L.R.C.P. Lond.,

Ass stant Demonstrator of Anatomy, University of Toronto ; Physician to Victoria Hospital for Sick Children ; Clinical Lecturer on Diseases of Children in the Woman's Medical College ;

AND

B. E. McKENZIE, B.A., M.D.,

Lecturer on Orthopædics and on Surgical Anatomy in the Woman's Medical College, and Surgeon to the Victoria Hospital for Sick Children, Toronto.

A CASE OF PERIPHERAL PARALYSIS FOLLOWING VARICELLA.

The case is reported by William Guy (*British Medical Journal*, 1894, 1, 679). The attack of varicella was mild, but about a fortnight after he was found in the morning to be completely paralyzed in his lower extremities. No paralysis in other parts. For three weeks there was no improvement. Shortly after this he made attempts at walking, but recovery was slow. At the end of three months he could walk fairly well. In addition to the complete muscular paralysis, there was considerable sensory loss. All the muscles of the lower limbs were involved, but the extensors were more profoundly affected. Knee-jerks and plantar reflexes were absent. Abdominal reflexes were active. The child, which was two and a half years old, was slightly rachitic, but there was no sign of syphilis.

INFANTILE SCURVY.

In connection with a paper on infantile scurvy, Dr. Fruitnight reports the following case (*Archives of Pediatrics*, August, 1894). A boy, nine years of age, had, for a long time, subsisted on a diet made up chiefly of salted meats, dry rye bread, and black coffee. When seen by the author he had complained greatly of pains near the knee joints, which his mother termed "growing pains." There were oval swellings about both knee joints ; they were very sensitive to pressure, and the boy made no attempt to walk, retaining the same position constantly on his chair, except when he would lie down. His gums were spongy, sore, and swollen, and bled very easily. He showed many minute ecchymotic points. His teeth were loosened and covered with tartar. Breath very foul. He had

alternate constipation and diarrhoea, and was very anæmic. He was put upon anti-scarbutic diet, potatoes, fresh vegetables, fruits, lemonade, beef, and mutton, with five grains of citrate of iron and quinine, with dilute muriatic acid three times a day. Within ten or twelve days he was practically well.

THE ETIOLOGY AND NATURE OF DIPHTHERIA.

In a recent report to the International Congress of Hygiene at Budapesth, Professor Leoffler arrives at the following conclusions with reference to the etiology and nature of diphtheria :

(1) The productive agent of diphtheria is the diphtheria bacillus. Dispute as to the etiological definition of this bacillus exists no longer. We can, therefore, henceforth indicate as diphtheria such forms of disease as are infested with the bacillus.

(2) Not infrequently cases appear in the early stages to the clinical observer as true diphtheria, which, however, are caused by other organisms, as streptococci, staphylococci, pneumococci, and in light or graver form may be mistaken for diphtheria. But the differential diagnosis can be effected through bacteriological research. Statistical compilations on the epidemic spread of diphtheria, as well as on the character of diphtheritic epidemics, cannot represent an exact definition so long as the bacteriological investigation of cases suspected of diphtheria fails to mark a division between true diphtheria bacillus and cases merely resembling diphtheria.

(3) Diphtheria epidemics show a various character, as do many other epidemics of infectious disease. The course of the epidemics is often very light, but also much more severe, indicated by the high figure of the death rate, the rapid infection of the larynx and the nose, and by severe heart and kidney affections, and consecutive paralyses. But also in the same epidemic instances of severe and light forms of disease frequently alternate irregularly.

(4) The variation, of course, will be determined by several factors : (a) By differences in the number and the virulence of the diphtheria bacilli ; the causes of the latter are not yet absolutely known. (b) By concomitant bacteria, and, indeed, as much by pathogenic as saprophytic ; the processes of infection with regard to the diseased mucous membranes in the passages and in the nose appear to influence the course of the disease unfavorably, in part by increasing the virulence of the bacilli, in part by weakening the body through absorption of decomposition products. (c) By individual tendencies not yet thoroughly recognized.

(5) The diphtheria bacillus can appear in the passages, especially of nose, of separate individuals without causing indications of sickness, which it first induces when it has actually established itself. Lesions of the mucous membranes, small eruptions, catarrhal changes, are favorable to its residence. In brief, meteorological conditions, giving admission by the first approach of catarrh, especially cold, damp weather, appear to favor the sickening from this cause. But this influence has to be more closely observed.—*British Medical Journal*.

RAYNAUD'S DISEASE WITH COMPLICATIONS.

The following account of a case of this rare condition is given by T. K. Monro (*Glasgow Medical Journal*, xli., 267): The patient, a girl, when first seen was twenty months old. She had marked hydrocephalus. There was a striking discoloration of the skin, which was said to have been present at birth, and at one time had existed over the whole body. Cold and crying rendered the discoloration more conspicuous, while heat rendered it less so. At present there are blue mottled patches on the face, legs and arms, and the back. There was extreme lividity or actual gangrene of portions of the extremities, especially of the second left toe and of the second right toe. Apparently there was little or no pain.

The patient was again seen five and a half months later, and two months after that, there being at both times a slight improvement. Three weeks later she was decidedly worse, owing probably to the cold weather; and a slight swelling immediately above the sternum was noticed on crying, which proved to be a diverticulum of the trachea, and a vertical slit in the wall of the trachea could be felt. She now suffers considerable pain, and is constantly crying. A dark-blue, almost black, spot is commonly present on each cheek. The reddish color is well marked on the hands and wrists, the back, and the hip. The second toe of the left foot is decidedly worse, and viewed from above the distal half is of pure blue (not black and not purple) color. The plantar surface is almost entirely blue. There is no blackness on the right foot, and there has never been any on the fingers. Nothing abnormal has been detected with regard to the heart, and the urine contains no albumin, no blood, and no sugar. There is no clubbing of the fingers, no muscular palsy or wasting, and no loss of sensation or swelling of the joints. There is no fever, no urticaria, and no scleroderma.

PATHOLOGY

IN CHARGE OF

JOHN CAVEN, B.A., M.D., L.R.C.P. Lond.,

Professor of Pathology, University of Toronto and Ontario Veterinary College; Pathologist
to Toronto General Hospital and Home for Incurables.

ASSISTED BY

JOHN A. AMYOT, M.B. Tor.,

Demonstrator of Pathology, University of Toronto; Assistant Surgeon to St. Michael's
Hospital; Physician to House of Providence.

TUBERCLE BACILLI IN NOSE.

Straus has demonstrated completely the occurrence of virulent tubercle bacilli in the nasal cavities of healthy persons who had been frequenting localities in which phthisical patients were habitually present.—*Archiv de Médecine Experimentale*.

VARIOLA AND VACCINIA.

One would think that it should be a comparatively easy task to determine whether variola and vaccinia are the same disease or not. Such, however, does not seem to be the case.

Jenner believed that vaccinia or cowpox was the result of inoculation of cattle with infectious material from the disease of the horse known as "grease," and thought it probable that smallpox had originated from infection of the human being with cowpox.

Turenne noticed a resemblance between some cases of syphilis and cowpox, and Creighton believes that the cases of supposed infection with syphilis by means of vaccination really shows the reversion of cowpox to its original form of a bovine syphilis.

Crookshank, in 1889, says: "We have been led to regard vaccination as inoculation of the human subject with the virus of *a benign disease of the cow*, whereas the viruses in use have been derived from several distinct and severe diseases in different animals." He further states that the true analogue of cowpox in the human being is syphilis, and that vaccination is of no avail against smallpox.

Some time ago Chaveau and the Lyons commission failed entirely to show experimentally that variola could give rise to vaccinia, or *vice versa*.

More recently Ducamp and Pourguier attempted the settlement of the same question, and, though using all precautions in their work, they, too, have not given a decisive answer. Their inoculations of a calf with human smallpox virus gave rise to the lesions of neither smallpox nor cowpox ; but, as further experiment showed, protected the animal against inoculation with cowpox.

A NEW METHOD OF DIFFERENTIATING EBERTH'S TYPHOID BACILLUS FROM THE BACILLUS COLI COMMUNIS.

Gorini says : In gelatine, to which 2 per cent. of urea has been added, the typhoid bacillus grows as usual for the first few days. On the third or fourth day the gelatine, which had been rendered somewhat cloudy by the added urea, clears up, and exhibits all through it small white, evenly-distributed granules, apparently crystals of carbonate of ammonia. The bacillus coli, on the other hand, causes formation of crystals, which are arranged in little heaps along the needle stab only. In addition, numerous gas bubbles are to be seen in the upper clear gelatine, which are apparently formed by the breaking up of urea into carbon-dioxide and ammonia.—*Centr. f. Bact. u. Parasit.*, October 20, 1894.

PATHOLOGY OF TETANY.

Dr. John T. Carpenter, of Pottsville, Pa., read a paper before the American Medical Association in June last upon the above subject. After a short historical sketch, in which he credits Dance with having first noted the disease, he defines it as "a nervous disorder, evidenced by tonic spasms of an intermittent character, which may involve any or all the groups of voluntary muscles from the extremities to the jaws, and which may be reproduced at will, during a period of intermission, by compression of the nerve trunks or great vessels which supply the muscles which have been involved in the spasm." The pathology of the condition has been almost completely unknown, mainly, perhaps, from the rarity with which a fatal termination is seen, but also because of the "various forms under which it has been observed to appear, and the various conditions and circumstances which attend its development." Four forms are spoken of by the writer as having been established, viz. : (a) Rheumatic, or epidemic ; (b) a chronic form, due to some debilitating condition—*e.g.*, prolonged lactation ; (c) gastric, due to dilatation of stomach ; (d) surgical, following removal of thyroids. The first two are very seldom fatal, whilst the last two are commonly so. Surveying the conditions under which tetany develops, we find that they present one feature in common, viz., the opportunity for septic infection. "Tetany, as a general rule, follows upon such

diseased conditions of the system as are observed to produce morbid discharges from mucous surfaces whose absorption is known to cause symptoms in remote parts of the body, due to the circulation of septic poison," and, summing up, "In all cases of recorded observations of morbid processes antecedent to tetany, a probable sepsis may be inferred, and no other cause common to them has, so far, been discovered. It is, therefore, logically necessary to assign the causation of tetany to this fundamental peculiarity as the antecedent factor, and to consider tetany, not as an independent disease, but as a disorder consequent upon some one of those diseases which generate septic poison."—Abstract of paper as published in *Journal of the American Medical Association* for August 4, 1894.

INDURATIVE MEDIASTINO-PERICARDITIS.

The following is an extract from a series of papers published by Thomas Harris, M.D., F.R.C.P., in the *Medical Chronicle*:

Cases are occasionally observed which, clinically, often present great difficulties of diagnosis, and where, at the autopsy, is found an adherent pericardium, with an increase of fibrous tissue in the mediastinum; the increased mediastinal tissue is united to the external surface of the pericardium, and both it and the pericardium are united to the left, and may be also to the right, lung. Such cases have been described by various observers, notably by Kussmaul,* to whom the profession is indebted for being the first to bring the subject ably and prominently before its notice, under the term of "Indurative Mediastino-Pericarditis." They are not commonly seen, but, I think, cannot be so rare as is frequently supposed. Well-marked examples of the affection present a very interesting clinical history, and one which is sufficiently distinctive to allow of the recognition of them before they reach that place of accurate diagnosis, the post-mortem department. I do not propose to consider the acute affections of the pericardium, nor the condition of acute mediastinitis. I desire to refer only to the chronic inflammatory states of these parts, and at the outset ought to explain that I employ the term *chronic* in the sense that the cases run a chronic or prolonged course, and at the post-mortem examination fibrous tissue is the chief morbid product found. Such cases may or may not have an acute onset, just as we see a case of acute pericarditis terminate in firm pericardial adhesions, and it is in the sense in which we speak of an adherent pericardium being a chronic case that the word chronic is here employed.

Pathologically, but probably not clinically, we may recognize three classes of cases of chronic inflammatory conditions in relation to the pericardium and the mediastinum.

* Kussmaul (Prof. Dr. A.), *Berliner klinische Wochenschrift*, Jahrgang, X., 1873, s. 433.

Class 1 comprises cases where there is an adherent pericardium, with marked increase of fibrous tissue in the mediastinum, not infrequently associated with a caseous affection of the lymphatic glands of the mediastinum, and where there is adhesion of the exterior of the pericardium to surrounding parts; a condition which is accurately termed *indurative mediastino-pericarditis*.

Class 2 comprises cases of an adherent pericardium with thickening of the sac and adhesion of the exterior of it to surrounding parts (sternum, costal cartilages, and lungs), but with very little and sometimes no general mediastinitis, a condition which has been termed *pericarditis externa and interna*. Cases of this nature are probably more common than those belonging to Class 1.

Class 3 comprises those rare cases where there is an increase of fibrous tissue in the mediastinum, without any internal pericardial adhesions. To cases of this class the term *chronic mediastinitis* is appropriate.

These cases, as I have said, represent three classes of chronic mediastinal and pericardial affections, which may be separated by the pathologist, but which the physician will have, in the present state of our clinical knowledge, much greater difficulty in separating during life. We may, probably, during the life of our patient, separate cases belonging to the third class from those belonging to the other two, but I think even the most experienced physician will have great difficulty in separating cases belonging to Class 1 from those belonging to Class 2, so as to be able, for instance, to predict that the pathologist will find the appearances of pericarditis externa and interna, and not those of indurative mediastino-pericarditis when the case terminates fatally. It appears also, from a consideration of the records published by various observers, that some of the cases described as representatives of indurative mediastino-pericarditis really belong, not to Class 1, but to Class 2, and would be more accurately described as cases of pericarditis externa and interna.

Editorials.

MANUFACTURERS' METHODS OF APPROACHING THE MEDICAL PROFESSION.

A COPY of the following circular (typewritten) was recently sent to each physician in Toronto :

"DEAR SIR,—If you have not been writing prescriptions for spectacles, we would like to have you begin. You can do much good by doing so, and it will be profitable to you. All you need to do is to write the patient's name on the blank we send you, and we will give you twenty-five per cent. of what the patient pays us for the glasses. We have added to our store our own grinding machinery, and can now grind to order any glass for any complicated case in a few minutes.

"In the past the writing of doctors' prescriptions has been confined to eye specialists.

"We have in our house an expert optician graduate in optics, who tests each eye with the Javal ophthalmometer and the ophthalmoscope. If you send your patients to us, we will benefit them with glasses at a reasonable price, and give you one-fourth of what they pay us. This will be all clear profit to you. And you get credit of prescription.

"We have everything in spectacles in stock, from the cheapest to the best.

"Hoping you will give us a trial, we remain," etc.

The impudence of this production, which is signed by a Philadelphia Manufacturing Company, is almost sublime. Our doctors are coolly asked to take part in a fraudulent transaction by giving bogus prescriptions to patients, and, after practising such deceptions, to accept commissions on sales of glasses. We sincerely hope that no physician can be found in Toronto who will, for one moment, think of engaging in business so dishonest and so disgraceful.

EDITORIALS.

PRELIMINARY EDUCATION FOR STUDENTS IN MEDICINE

DR. HERBERT SPENCER, in his recent address in the Faculty of Medicine of University College, expressed his opinion that those who intended to study medicine should receive "an education in which science and modern languages form a considerable portion of the study." The *Medical Magazine* says "this advice is sound," but at the same time condemns the methods of teaching mathematics which at present prevail in England. We quote from the *Magazine's* article as follows: "There is no need for the future student to be a specialist in mathematics; but surely a little more should be demanded of him in that direction than hitherto. Personally, we cannot help thinking that the *proper* study of mathematics is at least quite as efficient a discipline for the mind as the study of classics. By *proper* we mean the logical continental method of teaching mathematics, as opposed to the absurd cram system, which, we are sorry to say, still obtains in this country, and which, needless to add, simply sickens the young mind, and brings the budding intelligence down to the level of a penny-in-the-slot machine."

We are inclined to think that both Dr. Spencer and the *Magazine* are treading on dangerous ground when they encourage intending medical students to neglect the study of classics in their efforts to read French and German; but when we find a scholarly and cultured man like Dr. Spencer, and a thoroughly high-class journal like the *Medical Magazine*, in conservative old England, exalting the modern languages, we feel strongly inclined to ask Professor Hutton, of the University of Toronto, what he thinks about the matter. Again we quote from the article before referred to: "Latin has had its day. In the struggle for revival it went to the wall as a language, and any attempt to resuscitate it would, we are convinced, only result in failure. English, French, and German are now struggling for the mastery, and English is surely and steadily distancing its two rivals. Inevitably, the Anglo-Saxon tongue will be the language of scientific congresses of the future. Others put forward claims for Greek with as little justification. It is a fact that the great majority of English medical men at the present moment have but a very superficial knowledge of the classics. . . . We admire the enthusiasm of those who plead for a return to Latin or Greek as the language of medicine, but we are bound to say we see no prospects whatever for their ultimate success. As to Volapuk and other absurdities of the kind, they have been neatly disposed of by *Punch*: What is Volapuk? The universal language. Who speaks it? Nobody."

PHYSICIANS AND THE INDIGENT POOR.

WE publish in this issue a letter from Dr. T. E. Kaiser, of Oshawa, giving details of his experience in looking after a destitute family during a prolonged illness. It may be thought by some that the doctor did not receive very fair treatment from the reeve and council of East Whitby; but, before jumping at a conclusion in that direction, it may be well to consider their actions carefully from start to finish.

In the first place, the action of the reeve in the interest of the unfortunate family was very kind and considerate, and his pledges to Dr. Kaiser, considering the urgency of the case, were quite justifiable. We presume from the tone of the letter that the doctor thinks the action by the reeve and council in subsequently ignoring these pledges was scarcely just or honorable. So it might appear on a cursory glance, but a careful examination of all the circumstances of the case throws much light on the matter, and ought to carry weight with those who desire to form an independent opinion.

It is only fair to assume that Mr. George Mowbray is a just and honorable man. He is a Patron, and we have been told by a member of that body that the Patrons are all honorable men. Mr. Reeve Mowbray and his council, moreover, were good enough to consider the matter carefully at two different meetings. They were almost persuaded to act honestly; but, unfortunately, there was a colossal obstacle in the way—a precedent. This honorable body of wise and good men, after mature deliberation, decided that it would be dangerous to establish the precedent that it was right to redeem a pledge given to a doctor (no matter how reasonable or just that pledge might be). After all, we must confess that Mr. George Mowbray has shown that he has a great head. His cuteness and diplomacy almost reached the dizzy heights of some form of modern statesmanship. Probably his constituents will be proud of the way he *did up* Dr. Kaiser; perhaps they will send him to parliament some day.

Dr. Kaiser did not accept the position like a reasonable man, but was innocent enough to think that he could get justice in a court of law. We have no desire to criticize the judgment of the court; we presume the judge's interpretation of the law was correct, but we think that in this instance law and justice were two very dissimilar things.

We have received no intimation as to what Dr. Kaiser's course will be in the future, but we think we can tell. It may be that he has registered some rash vows with reference to the "indigent poor"; but, when he receives a message some day that the only child of poor, but deserving, parents is dangerously ill, he will forget all about East Whitby's representative Solons, and go at once to the afflicted family, and do all that he can to assist them in their hour of sore distress. Physicians are not saints, but there is a certain amount of good in them.

Correspondence.

PHYSICIANS AND THE INDIGENT POOR.

To the Editor of THE CANADIAN PRACTITIONER:

SIR,—I desire to bring before the notice of my fellow-practitioners, through the columns of your valuable journal, a matter somewhat practical in nature, the result of which may be of benefit to some one who, under similar circumstances, may be led at some future time into the same pitfall that I stumbled into. During these times of financial depression, it seems to me almost as necessary for the physician to be posted on the proper methods of collecting accounts as it is to be versed on the latest statistics of antitoxine. My unfortunate experiments in the field of money investigation may be instructive, even though they proved a failure. I will briefly outline the case to which I desire especially to refer; it is one of "the indigent poor." A family of this class fell into my hands in the spring of 1893. From April till August several members were taken ill at different times with a variety of ailments, inflammations, diphtheria, etc. In August, however, typhoid fever broke out in the ranks of the family circle, and at one time there were *four* cases in the house. This last calamity reduced them to the verge of necessity, and it was seen that some organized effort must be put forth or the family would die of neglect, as father, mother, and two children of nine and twelve years respectively were the victims of this disease. Being residents of the township of East Whitby, the reeve of that municipality, Mr. George Mowbray (a Patron, by the way), was asked to come to their relief. This he did, calling at my office during the early part of the siege, which lasted for thirteen weeks. He visited the cottage with me, and assumed, on the part of the township, the financial responsibility of the outbreak, arranged with a neighbor of the family to provide the necessities for the house, engaged a nurse, whom he paid one dollar a day, and also her board bill in a house next door. He charged me to see that the nurse did her duty by the afflicted, and assured me that I would get my pay from the council, as the case was an extreme one. "Stick to them" was his command, and I did so, fully

thinking that I was then working for the corporation of East Whitby. The cases ended in recovery, and all debts were paid by the council—*except the doctor*. Now comes the “tug of war.” The doctor’s bill came before the council (most of the members of which I am personally acquainted with, and this I am bound to say, *individually* they are a very decent lot of fellows, but *collectively* they are as mean as a man without a soul or without a heart). The affair was discussed, and they decided that, although the case was one of an extreme nature, as they never yet consented to pay a bill presented by a doctor they were determined not to establish a precedent. The affair was laid over for consideration, and at a subsequent meeting they voted the magnanimous sum of fifteen dollars towards payment for *drugs*, which was handed me for my work in these long, tedious cases. I protested, and finally decided to sue in the Division Court, which I did on December 4th, 1894. Every feature of the case was gone into, and it is the judgment and rulings of the case that I desire to emphasize. The judge reserved judgment in the case in order to deliver it in writing :

(1) He rules that if my claim is maintainable at all, it can only be from the time of the reeve’s first visit, notwithstanding that he paid other debts from the beginning of the outbreak.

(2) After reviewing the evidence as to what had passed between me and the reeve, the judgment says : “But putting the matter in the most favorable light for the plaintiff, I cannot find that the reeve had any authority to bind the council at all.”

(3) “It was argued that because the defendants paid for the nurse that, therefore, they should pay the doctor. This does not follow.”

(4) “It is also suggested that the defendants acknowledged their liability by paying \$15.00 on account. . . . No effect, therefore, can be given to this contention.”

(5) “I dismiss the action ; I give no costs to either party.”

In the judgment delivered I read as follows : “Without minutely going over the authorities cited, the following propositions of law as to the liabilities of municipal corporations may be deduced therefrom :

“(1) All such contracts must be by by-law under seal.

“(2) Where there is no by-law, and work has been done for the corporation, it is liable if they have received the benefit of such work.

“(3) They are liable for a breach of statutory duty.”

With respect to these points the judgment says in my case : “There is no *pretence* that the defendants are liable under the first head.” As to the second, it is stated that the only possible claim could be in the fact that the restoration to health saved the corporation one or more pauper funerals, and my claims are waived under this heading. My claims under the

third heading are overruled also, so that necessarily my only possible means of getting recognition would be under the first. From this we learn that, in case of accident or emergency to the poor, a doctor can only claim corporation pay when the council gives the "contract by by-law under the seal." Meanwhile, what becomes of the patient if the doctor must wait till the council meets and grants the contract? It does look like a farce to me that a reeve, in case of distress, can make a doctor believe the corporation will pay him, till the case is over, and then bid defiance to him and all the laws of creation.

I would like to know the methods adopted by other townships in such cases, and, if this is the common lot of hard-working, self-sacrificing country practitioners, the sooner the Medical Council takes up the matter and gives us some more satisfactory legislation on the subject the better it will be for all concerned. This is a subject which might well call forth some of the powers of the war-horse from Division No. 12.

T. E. KAISER.

Oshawa, Dec. 20, 1894.

Meetings of Medical Societies.

MARYLAND CLINICAL SOCIETY.

STATED meeting held December 7th.

Dr. Rohé read a paper entitled, "Clinical Observations upon the Relation of Somatic Diseases to Mental Derangement." This was followed by a paper from Dr. Preston on the "Etiology and the Pathology of Hysteria."

Dr. Wilmer Brinton read a paper on

THE INDUCTION OF LABOR IN NEPHRITIS,

with report of cases :

I have been induced to bring the subject of the induction of labor in nephritis to your notice by the reading of a paper on "The Significance of Albuminuric Retinitis in Pregnancy," written by Dr. R. L. Randolph, of this city. Dr. Randolph reports five cases of albuminuric retinitis occurring in pregnant women whom he has seen during the past two years, in which cases he decided, by ophthalmoscopic examination, whether it was the proper treatment or not to induce labor for the purpose of saving the eyes, and perhaps the life, of the woman. In the cases related not only were the eyes saved where labor was induced, but in the cases where he advised the continuation of pregnancy the women escaped eclampsia. Judging from the first case reported by Dr. Randolph, there must be some difference of opinion even among oculists as to when premature labor should be induced, for the report of this case which I shall now read will show that the first oculist consulted advised a different method of procedure from that recommended by Dr. Randolph.

CASE. Mrs. M., æt. 31 years, three children living, and up to the fourth month of her third pregnancy had enjoyed good health. In the early part of the fifth month she began to have violent headaches, which could only be relieved by strong anodynes. They persisted for two weeks, when she noticed that her sight was growing dim. It continued to grow worse, until she was practically blind in one eye, and the sight in the other but little better. At this time an oculist was called in, who pronounced it albuminuric retinitis, and found the urine rich in albumin

and some casts present. The induction of labor was advised, performed, and a dead child born. The woman had convulsions, but recovered, with complete restoration of sight. One year later she again conceived, and in the fourth month was attacked with similar headaches. Fearing that her sight would again become bad, she consulted an oculist, who advised that if she waited for normal labor she would lose her sight, and, probably, her life. Dr. Kelly was sent for to induce labor, but referred the case first to me. I found the vision $\frac{20}{80}$ in both eyes, and a low grade of hyperopic astigmatism. I found absolutely nothing to denote progressive disease in the fundus. The question was whether or not to induce premature labor. There was a faint trace of albumin in the urine, but no casts. I concluded that the evidence did not justify the operation. My advice was followed, and the patient sent home, to give birth, a few months later, to a boy.

The conclusions were as follows :

(1) Visual disturbances occurring in the first six months of pregnancy, and especially when associated with violent headaches, frequently mean albuminuric retinitis, and, if this condition is found, to save sight pregnancy should be at once terminated.

(2) Visual disturbances showing themselves in the last seven weeks of pregnancy, while indicating the same retinal lesions, are of less gravid import in so far as sight is concerned, and, unless they are very pronounced, and associated with widespread ophthalmoscopic changes, should not, in themselves, call for the induction of labor.

(3) The occurrence of renal retinitis in one pregnancy does not mean that the woman will be likewise affected in a subsequent one. And, even though headache be present and albumin found, so long as the fundi are free from signs of existing retinitis the question of sight will not be considered.

The very grave prognosis in cases of eclampsia occurring in the pregnant woman, the woman in labor, or the parturient, makes the question of nephritis a very interesting one to the obstetrician. Experience and statistics prove that women who have chronic nephritis conceive and carry their children to full term without having convulsions. Indeed, it seems that, if they do not abort, they are less liable to eclampsia than women who for the first time develop kidney disease during pregnancy. Cases of nephritis occurring in the pregnant woman, whether chronic or acute in character, must make the physician in charge anxious about the outcome of the case, for the rates of mortality vary from 25 to 40 per cent. for the mother and from 50 to 75 per cent. for the child, when we have eclampsia occurring during pregnancy, or before the completion of pregnancy. The question comes to us for decision whether we shall follow conserva-

tive treatment, which, at best, will only ward off impending danger, or whether it is best to place the patient at once in a position of comparative safety by the induction of premature labor. Dr. Lusk says: "The weight of authority seems to me favorable to procrastination, the interruption of pregnancy being regarded as an extreme measure, justifiable only in case of utmost peril. But my own convictions are clear that, so soon as grave cerebral symptoms develop, the period of folded hands has passed."

The four cases I shall report have come under my notice during the past eighteen months, and, while in only two cases was premature labor induced previous to convulsive movements, yet in the other two, although only seen first when in convulsions, premature labor was induced, as they were not at full time.

CASE 1. Mrs. R., mother of nine children, and between seven and eight months advanced in her tenth pregnancy. Her physician had watched her closely for some weeks, and made diagnosis of nephritis. He found albumin and casts in the urine; specific gravity, 1010. Eyesight very much impaired, and rapidly growing worse; headaches violent for days, and several times had had convulsive movements. At my first visit we decided upon premature labor, and, under strict antiseptic precautions, I introduced a bougie at 4 p.m. on Friday afternoon. At midnight of the next day she was delivered of a living child. During the time of the induction of labor she had to be kept under the influence of potassium bromide and chloral hydrate. For a week or two both mother and child did well, but finally all her symptoms grew worse, she became totally blind, went into coma, and died, two months after the birth of a child.

CASE 2. Mrs. A., æt. 40 years, pregnant for the ninth time, and supposed to be eight months advanced. She was blind, œdematous, pulse rapid, and urine full of albumin. There were very marked indications of beginning convulsions. Treatment had been: Infusion of digitalis, compound jalap powder, and chloral hydrate and bromide of potash. I introduced a bougie as in Case 1. Hot vaginal douches were given, and some eleven hours after the mother was delivered of a living child. Some nine months after her physician writes me that the child died within a month, but that Mrs. A. recovered with good sight.

CASE 3. A colored out-patient, with a history of eleven convulsions before my assistant saw her. An examination showed pregnancy of eight months. Child living, woman aged seventeen. She was removed to the hospital, and chloroform, bromide of potash, and chloral hydrate given to control convulsions. Bougie was introduced, but later we had to dilate with the finger. Simpson's forceps were applied, and, after great traction, a dead child delivered. The mother never regained consciousness; died four hours later, having had fifty or sixty convulsions.

CASE 4. Mrs. V. C., in her first confinement. During her pregnancy had been well. Had been on the street the day previous and slept well that evening. In the morning, while at breakfast, she suddenly clapped her hands to her head, and cried, "I cannot see," and fell to the floor in violent convulsion. Within thirty minutes she had six more. Chloroform was given during convulsions, and chloral every hour during the intervals, when the patient had intelligence enough to swallow when told to do so. With the assistance of Dr. Watson, dilatation was made by the finger, Simpson's forceps applied, and a living child delivered. The woman had, in the next thirty-six hours, about ten severe convulsions, and was practically unconscious for forty-eight hours afterwards. Hypodermics of morphia of one-third of a grain were used, and we saw marked results for good after each dose. She gradually grew better, but complained of bad sight and violent headaches for nearly two weeks. She has done well ever since.

In the brief report of these cases I have only mentioned a few of the many methods of inducing premature labor, but in closing I wish to commend the method of dilating the cervix with the finger.

Dr. Michael: This question calls always for quick action, and delay is dangerous. I wish to say a word about the diagnosis. It is made often by the ophthalmologist. A doctor should make the examination of the kidney lesion himself, and it should be so well known to the obstetrician that he should not let the patient go to blindness. I should feel shabby if an ophthalmologist had to tell me of the existence of the disease. As to the treatment, I disapprove of Dr. Brinton's method of producing labor, that of using the bougie when the woman is having convulsions. Rapid dilatation by the finger is the safest and best method of bringing it on, though it is a difficult and troublesome plan. When the hand is used, you run no risk of getting into the wrong place or doing any damage. The two remedies I like best are morphia and venesection. I do not know what venesection does except bring out a lot of bad blood, but it most surely produces good results. He believes the results are better on the both extremely satisfactory, and that the latter has not been properly tried.

Dr. William T. Howard is a strong advocate of it. Before coming to Baltimore he had treated seven cases by free bleeding, and saved them all. The next six cases he saw here were treated differently, and all died. The next one was bled and got well. I believe the results are better on the average than are to be obtained in any other way.

Dr. Hiram Woods: The question of the eye-symptoms is apt to be misunderstood unless you bear in mind that there are two varieties of blindness associated with albuminuric conditions in pregnancy. One is the sudden failure of sight, such as described by Dr. Brinton, where there is no retinal lesion; the other a case of true inflammation, with white

plaques and decided retinal changes. The question is whether in any of Dr. Brinton's cases there was true albuminuric retinitis. There were no ophthalmoscopic examinations made, and in all he said the blindness was sudden, and, with one exception, all got well. I can recall a patient in my care who had albuminuric retinitis in her first pregnancy, and her sight was reduced to a very small point. I followed her through four or five pregnancies, and, although nearly blind in each, her sight was always restored to the point it had been left during the first pregnancy. Four of Dr. Randolph's cases had these changes, the other did not. The first case of his which was referred to Dr. Brinton was not properly diagnosed. With a woman in her first pregnancy with ensuing albuminuric retinitis, the question suggests itself: Is premature labor in the fourth or fifth month justifiable? I should think it was, but how would that be regarded from an obstetrical point of view?

Dr. Todd: I find that in New York the custom among the physicians is to justify the operation for the saving of life, but not simply to save eyesight.

Dr. Norment: I wish to mention two cases seen recently. One in her fourth pregnancy. In her first she had eclampsia five or six weeks prior to labor, and conservative treatment was adopted. She was delivered of a child which had evidently been dead for some time. In her second, she had eclampsia during labor, and was delivered by forceps of a living child. In her third, she had a perfectly normal pregnancy and labor. In the fourth I was sent for, and found her in eclampsia in the eighth month of pregnancy. She was very large, weighing 240 pounds. There was no evidence of the onset of labor, and the difficulties of inducing labor, the condition of the patient, and the fact that she had been through the thing before successfully, led us temporarily to postpone the induction of labor. We followed Dr. Michael's plan and bled her freely. She was stone blind, and I found any number of white plaques in the retina. Five weeks later she was delivered of a stillborn child. There was little return of vision until after labor, but later it came up to about one-third normal.

CASE 2. I found a woman eight months pregnant in eclampsia for several hours, recognizing no one, and complaining of pain in the head. I bled her freely, she became conscious at once and was altogether better. She had been perfectly blind, but soon was well enough to read the newspaper. She was afterwards delivered of a dead child. She had, I think, uræmia without retinitis; I found no albumin in the urine.

Dr. Brinton: Where we have time certain methods can be used for inducing labor, but when in a hurry the use of the finger is best. We did use morphia in one case, and with good results. I once reported four cases in which I had bled, and three recovered. In the next three, treated in the same manner, all died.

PATHOLOGICAL SOCIETY OF TORONTO.

THE first regular monthly meeting of the winter was held in the Biological Building, October 27th, 1894, the president, Dr. Greig, in the chair. After the transaction of some business introduced by the executive, the following programme was proceeded with :

(1) "Rupture of the Heart," with specimens. Drs. Wm. Oldright and R. J. Dwyer. Discussion by Drs. Wm. Oldright and H. Hill.

(2) "Hæmorrhagic Pachymeningitis," with specimens. Dr. J. Fotheringham. Discussion by Drs. Graham and McPhedran.

(3) "Pulmonary Tuberculosis," with specimens. Dr. J. Caven.

(4) Microscopic specimens from a case of malignant disease. Dr. H. B. Anderson.

(5) Specimens of diphtheritic membrane forming casts of the turbinated bones, presented by Dr. J. Fotheringham.

Dr. Dwyer presented an extremely interesting specimen of rupture of the left ventricle, occurring in a female of advanced years, due to local fatty degeneration of the muscle, secondary to gradual occlusion of the coronary artery supplying the region of the tear, from atheromatous changes, part of a general arterio-capillary fibrosis. The specimen was discussed by Drs. Amyot and Barnhart.

The papers of Drs. Oldright, Fotheringham, and Hill are held for future publication.

Owing to the absence of Dr. Caven, his paper was not presented.

Dr. Anderson's specimens were held over until his paper could be presented.

Specimens of diphtheritic membrane removed from the nasal passages by the use of a pyrozone spray were presented by Dr. Fotheringham.

The meeting then adjourned. The following are the officers of the society for the current year: President, Dr. King; vice-president, Dr. Nevitt; treasurer, Dr. Primrose; corresponding secretary, Dr. Barnhart; acting recording secretary, Dr. Hill.

The second regular monthly meeting was held in the Biological Building, as usual, on the last Saturday of the month, November 24th, 1894, the president, Dr. Greig, in the chair. The attendance was good, and an interesting programme was presented, as follows :

(1) "Uterine Mole," with specimen. Dr. Carveth.

(2) "Histological Changes in the Liver in Typhoid Fever," with specimens. Dr. Amyot.

(3) "A Case of Malignant Disease of the Intestine," with specimens. Dr. Anderson.

(4) "Friedreich's Disease," with specimen. Dr. Meyers.

(5) "Bacillus of Bubonic Plague," with specimens. Dr. J. Caven.

Dr. Carveth's specimen, removed by the finger from the uterus of a woman of thirty-six, who had been suffering from metrorrhagia, more or less, for three months previously, consisted of a grayish membrane moulded over an elongated blood clot. Dr. Scadding thought that villi were present at one part of the outer surface, and referred to the erosion of the uterine walls sometimes accompanying the formation of uterine moles. Dr. Fotheringham suggested that the formation of a clot in a membrane such as that presented might occur in membranous dysmenorrhœa.

Dr. Caven's paper included some historical notes of the plague, with an account of its symptoms and morbid anatomy. The specimens presented were from a case occurring during the recent outbreak in Canton.

The papers of Dr. Amyot, Dr. Anderson, and Dr. Meyers, presented as initiatory addresses, will be published hereafter.

Dr. Anderson's specimens were referred to a microscopic committee for further examination.

Specimens from a case of ununited fracture of the femur were presented by Drs. Wm. and H. Oldright. The patient, an old man, had sustained a fracture of the upper end of the shaft by a fall from a tree. He had also suffered from cystitis. At the post mortem, conducted by Drs. Dwyer and H. Oldright, general peritonitis was found. The bladder wall was immensely hypertrophied, and the ureters dilated, especially on the right side, where there were also pyelitis and hydronephrosis. The left kidney and the bladder presented the slaty pigmentation of chronic inflammation. Posteriorly, the bladder wall was softened. The middle lobe of the prostate was enlarged.

Dr. Caven thought that the whole condition of the urinary tract might be accounted for by the presence of the enlarged middle lobe of the prostate. The peritonitis was, no doubt, secondary to the septic processes in the urinary tract.

Dr. Peters accounted for the non-union of the fracture, in spite of the formation of both ensheathing and pin callus, to the septic condition of the patient. He considered dilatation of the bladder more common than hypertrophy, as a result of enlarged middle lobe of the prostate.

Dr. Greig referred to a case recently reported by Mansell Moullin. The patient, a man over seventy years of age, had suffered from cystitis, associated with enlarged prostate, for years. On removal of the testicles, marked improvement occurred within a week, due to diminution in the size of the prostate. Considering that the prostate becomes congested during sexual excitement, and that chronic enlargement frequently occurs in those indulging sexually to excess, the pathological connection of this operation with the disease is plainly seen.

Dr. Oldright had obtained a history of faulty catheterization of his patient, which he considered accounted for the cystitis.

The executive recommended that an open meeting of the society be held. After some discussion, it was decided to hold an open meeting on January 25th, 1895. Corresponding members are invited to communicate to Dr. Barnhardt, Little York, corresponding secretary of the society, any interesting subjects which they may desire to present on that date.

The meeting then adjourned.

The third regular monthly meeting of the Pathological Society of Toronto was held in the Biological Building, December 29th, 1894, the president, Dr. Greig, in the chair.

The following specimens were presented :

Dr. Peters presented two specimens. The first was a neuroma developed in the stump of a left arm amputated on account of a bad crush in a railway accident. After the operation there had been some suppuration. Healing followed, however. About one year later pain was felt in the distribution of the median and ulnar nerves in the hand. The neuromata could be readily felt at the site of operation, and the thickened nerve cords traced to the subclavicular region. There was local tenderness of the stump. On operation, the tumors were easily found and removed, as also were most of the branches of the brachial plexus. The artery was merely a fibrosed cord. Improvement followed. The local pain and tenderness disappeared, but some pain persisted, referred to the palm of the hand. The proximal end of the exsected nerve was healthy. Dr. Peters introduced Mr. Hunter, an undergraduate of Toronto University Medical Faculty, who had examined the specimens microscopically. Mr. Hunter presented a detailed report of the conditions found. The tumors consisted chiefly of broken-up nerve fibres and fibrous tissue.

Dr. Graham thought that this condition was similar to that found in keloid, and in some cases of molluscum, and that the occurrence of neuromata was probably due to some constitutional peculiarity of the patient.

Dr. Peters then presented a sarcoma of the thigh removed from an Irish setter. The tumor had been growing for several weeks at the upper part of the femur, and was hard and pulsating. The foot was much swollen, and lameness had, of course, resulted. On dissection the growth appeared to have commenced near the neck of the femur, perhaps subperiosteally. The tumor was massive, whitish, soft, and homogeneous. Fresh teased preparations showed cells of various sizes and shapes, some spindle-shaped, but more irregularly round; also muscle fibres. Hardened specimens showed on section a well-marked sarcomatous growth, in the mass of which lay muscle fibres. Dr. Peters considered these as remnants of the original muscle which had been extensively

infiltrated by the new growth, and considered that the specimen demonstrated the occurrence of infiltration in sarcomata. Secondaries were not found, but a complete post mortem was not held.

Dr. Primrose thought that while a sarcoma originating in fibrous tissue would expand and compress the fibrous tissue about it, thus forming a capsule and failing to infiltrate, yet a growth originating in other tissues might, as in this case, infiltrate freely.

Dr. Caven referred to the comparative frequency of the occurrence of sarcomata in the lower animals, especially in the extremities, and pointed out their tendency to mucoid degeneration, their feeble malignancy, and the usual absence of secondaries. In the cow and horse melanotic sarcoma, which is very malignant in the human, is not very uncommon, nor is it particularly malignant.

Dr. Primrose then presented a leg removed from a boy of 13 years. The leg was absolutely useless from infantile paralysis, hanging loose, and sometimes knocking the patient's crutches from under him. There had been complete paralysis of all the leg muscles, and the psoas appeared to be the only muscle in the thigh capable of movement. Dissection showed apparently complete conversion of the soleus and gastrocnemius muscles into fibrous tissue. The posterior tibial nerve was extremely small. There was a very large amount of subcutaneous fat, contrasting with the complete absence of inter-muscular fat. Dr. Primrose suggested that this condition supported the view that the trophic nerves of the skin were distinct from those of the muscle. It was held by some authorities that the former passed out of the cord through the post root, the latter through the anterior. Sections of the nerve and muscle are to be presented later.

Dr. Caven suggested that the deposit of subcutaneous fat might be simply a provision of nature to preserve the contour of the limb, compensatory to the atrophy of the muscles, and referred to the large deposit of fat occurring in the pelvis of an atrophied kidney, especially in cases of unilateral atrophy, where the fat helped to fill up the space formerly occupied by the kidney.

Dr. McPhedran thought the condition more likely due to a local anæmia, which generally favors fat deposit, pointing out that in infantile paralysis the local circulation was poor and nutrition low.

Dr. Oldright suggested that the nutritive material which, under normal conditions, would have supplied the muscular tissue might, in atrophy of the muscle, be stored up as fat subcutaneously.

Dr. Graham referred to the deposit of fat between the muscles in cases of acute muscular atrophy, as also in pseudo-hypertrophic muscular paralysis. He thought that the existence of separate trophic centres for the skin and the muscle improbable.

Dr. Primrose pointed out that the deposit of fat, if due to local degenerative changes, would have been more diffuse.

Dr. Caven then presented a specimen and photographs, showing tubercular cavities in a human lung, with exposed vessels traversing it, some of which exhibited aneurismal dilatations. He pointed to this as a frequent source of hæmorrhage in phthisis. Also a second fresh specimen, showing bronchiectases, associated with abscess of the brain. Dr. Graham supplied the clinical history. The case will be reported in full later.

Dr. Anderson submitted a microscopic specimen of colloid matter removed from the uterus by curetting. Six months ago, a large amount of colloid material had been obtained, and a similar large amount recently. Between the two curettings a thin colloid discharge had been constant. He considered the case one of colloid carcinoma, and referred to the glandular polypoid growth described by Thomas and Munde as springing from the cervix.

Dr. Barnhart's specimens were not ready. Dr. Barnhart referred to the ataxic symptoms presented by young puppies before their eyes were open, and stated that he had found the cord in such cases not fully developed. He proposed to present a complete account of the histological features later.

Dr. Cameron's specimens were presented in his absence by Dr. Primrose. They consisted of an ovarian cystoma removed from the right side and an ovarian papilloma from the left side of the same patient, a married woman of about 46 years, who had borne two children. A tumor had first been observed on the right side in September last about the size of a goose egg. The cystoma was adherent by soft, easily broken adhesions to the anterior abdominal wall at all points of contact and to the great omentum, necessitating ablation of a portion of the latter on account of hæmorrhage. The surface of the cyst was soft and friable, giving way under forcipressure, the pedicle breaking spontaneously when subjected to the weight of the cyst wall. The papilloma occupied Douglas' cul-de-sac, and was non-adherent.

Dr. Caven thought the cystoma probably sarcomatous in origin. Sections will be presented later.

Dr. Hill presented gross and microscopic specimens of caseous matter found in urine on two occasions from the same patient. On each examination the urine was clear, acid in reaction, and quite free from albumin, pus, or blood. The particles found were whitish or yellowish, soft and cheesy, varied from the size of a pin's head downward, sank quickly in the urine after being shaken up, and were insoluble in acetic acid. Under the microscope they presented a granular appearance, and at intervals crystals resembling those of neutral calcium phosphate, conical in outline, and sometimes arranged in rosettes. The bacillus tuberculosis was

detected in some of the particles. The statement of Von Jaksch that material, apparently caseous, is found in some cases of non-specific inflammation of the genito-urinary tract was referred to, and the explanation offered that these conditions might have been tubercular, the particles examined having, nevertheless, been free from bacillus tuberculosis, as in some of those in the present case. The history of the patient could not be obtained further than that rapid emaciation had occurred. Owing to the absence of albumin and pus, a tubercular condition had not been suspected.

Dr. Caven mentioned the opinion of Malassaz that typical tubercular processes were occasionally found due to a peculiar coccus growing in zooglœic masses. Courmont believed that a similar condition might occur as the result of the action of a bacillus distinct from Koch's bacillus tuberculosis; and referred to the difficulty of finding the bacillus tuberculosis in some cases of undoubted tubercular caseation in lymphatic glands, in the liver, and, in cases of acute miliary tuberculosis, in the lungs. He referred also to a bacillus found by himself in a case of ulcer of the thigh, which gave the stain reactions for bacillus tuberculosis, but not the typical appearance. The ulcer had healed under a course of iodides and mercury.

Dr. Peters believed that in many cases where the bacillus could not be found on examination inoculated guinea-pigs would develop tuberculosis.

Dr. Cameron agreed with this, and referred to inoculations made with bodies from knee-joints and tendon sheaths, which had produced tuberculosis, although the bacillus had not been otherwise demonstrated.

Dr. Graham referred to similar experiments in cases of sero-fibrinous pleurisy, and to the investigations of a Russian observer, who found the bacillus absent in only very few cases of pulmonary phthisis.

Mr. McKenzie thought that spores might be present in material where bacilli were not found, thus accounting for its infectiveness on inoculation into animals. He referred to certain granular bodies recently noted as retaining the differential stain in cases where bacilli were absent, and which were by some observers regarded as spores; also to a case where, in alkaline urine containing pus, but no caseous matter, he had found a bacillus giving the stain reaction of bacillus tuberculosis, but differing from it in appearance, which he believed to have been the smegma bacillus.

The report of the microscopic committee was withheld, being incomplete.

The meeting then adjourned to examine the microscopic specimens presented.

In accordance with a resolution passed at the last regular monthly meeting, an open meeting will be held on the last Friday of January,

1895. Corresponding members of the society are invited to give notice to Dr. Barnhardt, corresponding secretary of the society, Little York, of any specimens or papers which they wish to present to the society on that date.

TORONTO CLINICAL SOCIETY.

THE twentieth regular monthly meeting of the Toronto Clinical Society was held in St. George's Hall, Elm street, Toronto, commencing at 8.30 p.m., January 9th, 1895.

Dr. Ryerson, the president, occupied the chair.

There were present Drs. Aikins, Meyers, Graham, Baines, Grasett, E. E. King, Leslie, Spencer, J. A. Temple, Chas. Temple, Atherton, Cassidy, Fotheringham, Ross, Johnson.

The minutes of the nineteenth regular monthly meeting were read by the secretary and approved.

Dr. Leslie presented a case of

DISLOCATION OF THE ACROMIAL END OF THE CLAVICLE UPWARDS,
which showed an excellent result. In reference to the case the doctor said :

This young fellow was thrown out of a buggy in June last. My only excuse for showing him is that so very few cases recover without some displacement, and they very seldom have such perfect use of the arm as this man has. He is an hostler, and consented to stay in bed for a longer time than usual, because he requires the use of his arms so much above his head. He has got the perfect use of the arm. The fracture was first put up with strapping, but he was so thin that it cut through his flesh, and it could not stand anything but an ordinary bandage after that. When I looked at it last it did not seem to be any higher than the other one, but I see to-night it is a shade higher than the other side. There was considerable displacement at first. They sometimes have a little loss of power in their upward movements.

Dr. Grasett : Only when it is very bad, I think, in all the cases I have known. I think you will see it stated in surgical works as well. I have not looked it up for some time. A man may have a good deal of displacement, and if he gets good treatment, and it gets anywhere near the original point again, he gets almost the perfect use of his arm—at any rate, good use.

Dr. Atherton : In cases of this kind, a broad strip of adhesive plaster passed around the elbow, and carried over the back and around over the shoulder, and brought across the displaced bone so as to make a pressure somewhat upon it and keep it steady ; they claim good results from that treatment. It is better than keeping in bed, which is very irksome.

Dr. E. E. King presented a specimen of

OSTEO-ENCHONDROMA.

The case I wish to show to you is one I reported on about two years ago (CANADIAN PRACTITIONER, February, 1893). It is a case of osteo-enchondroma of the hand, of which I left two fingers, and we did not at that time remove this growth, owing to the fact that I was not sure as to the ultimate result of a removal of a portion of the growth from the bone; but as you will see in the photograph that over the knuckle of the index finger was a growth of considerable size, I should say about equal to half an ordinary egg, and, as the extensor tendon of the forefinger was involved in it, I separated the tendon as much as possible and shaved the growth down as nearly to the normal size of the bone as I felt justified in doing, without running too great a chance of destroying the whole bone. Since that time the little finger has regained a considerable amount of motion, and the growth on it has increased only slightly. I think the little portion we left on the index finger of the upper part has even got smaller. The question arises, since that remaining on the little finger is growing only slowly, as to the advisability of any surgical interference with that growth at the present time. He is a man who at that time did very heavy work. He was on the railroad, and when he had those lumps on his hand he could wield the hammer and hold a chisel, and since that has been removed he has gained a great deal more use of his hand. I asked him to come up this evening, so that I might present it and get the opinion of the society on the condition that is remaining there.

Dr. Grasett: These growths are always very slow, and as he has good use of his fingers he should wait and keep it under observation. I do not think you can take any active operation on it at the present time. It can be removed at any time, if necessary.

DISPLACEMENT OF THE LIVER.

Dr. Graham: This patient I present to-night is a case of abdominal disease, in which there appears to be a displacement of the liver to the left side; the displacement, as far as we can make out from the history of the case, has been the result of an injury. There is nothing special about the family history. The boy was raised in the city of London, England, and after working in various places in London, on the Thames embankment, afterwards in a newspaper office, finally went to Mr. Fegan's Home for Boys, and was sent out to this country. Last April he came to Canada, and was sent to the Boys' Home, on George street, in this city, and on May 1st he was sent to Oakville, where he engaged with a farmer and did farm work. He says he did not work hard, has always been healthy, never had a day's sickness until he crossed the Atlantic. During the latter part of last July the patient met with a severe accident while driving a

wagon loaded with stone. He slipped off the front of the wagon between it and the doubletree, landing in front of the wagon wheel. The wheel passed completely across his body from right to left, fracturing several ribs on the left side. The wheel struck the body, he thinks, just below the border of the ribs on the right side and passed completely across, breaking seven or eight ribs. He was unconscious when picked up. Dr. L. H. Aikins was called and dressed the fractured ribs. He attended frequently, the patient being under his care for three weeks, and he says that after that he returned to the Boys' Home in this city early in September. He was without medical attendance since, although he has never fully recovered from the accident, suffering more or less pain continually. On November 19th he engaged with a tanner to learn the business. He, however, found it impossible to continue at this employment, suffering severe pains in the upper part of the abdomen. His employer took him to see a doctor, who said he was suffering from ascites and advised him to return to the Home. He was seen by Dr. Thorburn at the Home, and he was sent to the hospital. The patient complains very much of a distended abdomen. The patient is only fairly well developed; there are signs of neglect in the child; small limbs in proportion to the body and somewhat dwarfed. He has rickety nodules on the ribs. He has somewhat the appearance of having been a badly nourished child. There is no special morbid appearances except those. These nodules on the ribs are quite marked, showing he had rickets as a child. He was put under diuretics and purgative treatment. The result was that the ascites disappeared in about two weeks so that it was entirely gone. The abdomen was still tender, but the fluid had disappeared. We then stopped the treatment for a few days and found the fluid formed again. We then continued the treatment again for about a week, and left off about two weeks ago, and the fluid has not formed again. After the fluid disappeared we found that there was an absence of dullness in the hepatic region here on the right side, and that large organ seemed to exist on the left side extending around the body. The other day I inflated the colon with air and found that the colon passed up here in front of this large mass, which we considered to be the liver, and down on to the other side. The stomach is evidently pushed upward and towards the left side, and I think that this large organ here cannot be anything else than the liver pushed over from its proper position in the right side. Of course, we are not positive that this is the result of the accident, because we do not know what the position of the liver was before the accident, but the wheel came over just in the direction it would push the liver over.

Dr. Atherton suggested a section for examination.

Dr. Grasett: I do not think there is any doubt but it is a displace-

ment of the organs from the extreme dullness. There is no history of enlarged spleen ; the symptoms are not those of enlarged spleen.

Dr. Atherton : If the liver is found on the left side congenitally, you would think the stomach would be on the right. And Dr. Graham, I suppose, from his examination, thinks the stomach is on the left. Therefore, if it is the liver which has been displaced by the injury, that it can be displaced by the injury and not return to the original position and not kill the boy I cannot believe. I cannot believe it is either spleen or liver.

Dr. Graham : I was so satisfied about the position of the stomach that I did not inflate it.

Dr. Grasett : There is only a line of dullness to the extent of one finger's breadth. Below that it is all clear.

Dr. Graham : I think that is the intestine ; it is not the colon. It must be the small intestine, because the colon was distinctly mapped out.

Dr. King : There is quite a tender point on the left side about on the tenth rib near the border of the growth or body that I would like to have explained if it is the liver.

Dr. Graham : He is doing so well I thought he was getting along as well with his liver on the right side as on the left, so I have not touched him. If the ligaments that bind the liver in its proper position were torn, there is no reason why it should go back. It would stay where it was, and form again in the new place.

Dr. Grasett : Would not the tendons tend to draw it back ?

Dr. Atherton : It seems to me, from the description of the accident, the boy was on the left side, and the wheel went just below the ribs. If it had fractured the ribs on the right side, possibly the liver might have been displaced to the other side ; but the wheel passed below the edge of the ribs on the left side, so I cannot see how in the world that pressure would press it over to the other side. It would possibly press it up against the diaphragm. The ribs were fractured on the left side, and not on the right.

(To be continued.)

Book Reviews.

HEART STUDIES, CHIEFLY CLINICAL. No. 1. By Wm. Ewart, M.D. Cantab; F.R.C.P. Lond.; M.R.C.S. Eng.

The present number of the "Heart Studies" treats of the "Pulse Sensations." It appears to be quite exhaustive, embracing both theory and practice. The illustrations, chiefly diagrammatic, are very numerous, and the book is put out in good style. The publishers are Bailliere, Tindall & Cox, of London.

A MONOGRAPH ON DISEASES OF THE BREAST: THEIR PATHOLOGY AND TREATMENT, ETC. By W. Roger Williams, F.R.C.S. London: John Bale & Sons.

This is a good book upon an important subject. It shows the results of careful work and of large opportunities for observation, which have been made much of. It is a work of a kind that too few of our general practitioners pay any attention to, specializing, as it does, in a field upon which every medical man must enter. The publishers' part has been fairly well done, though many of the illustrations are not such as should be found at the present day.

A TEXT-BOOK OF HYGIENE. By George H. Rohé, M.D., Superintendent of the Maryland Hospital for the Insane; Professor of Therapeutics, Hygiene, and Mental Diseases in the College of Physicians and Surgeons, Baltimore, etc. Published by the F. A. Davis Co., Philadelphia.

This is a book of over 500 pages, royal octavo, in the same clear typography as the "Annual of the Medical Sciences," by the same publishers. It deals with the subjects taken up in other works on hygiene we have had occasion to notice. The chapters on "Food" and "Quarantine" are very full, the latter occupying over 100 pages. The various regulations, maritime and interstate, and the mode of carrying them out, are fully set forth.

LOCAL ANÆSTHETICS AND COCAINE ANALGESIA: THEIR USES AND LIMITATIONS. By Thos. H. Manley, M.D. 180 pages. St. Louis: J. H. Chambers & Co., 1894.

For many years Dr. Manley has, when the opportunity offered, urged the substitution of cocaine for the systemic anæsthetics, in some of the major, as well as in many of the minor, operations, claiming that the difficulties and dangers attending these procedures would thereby be reduced.

While the comparison drawn of the risks attending the use of cocaine as an anæsthetic with that of chloroform or ether is rather strained to the advantage of cocaine, still it must be admitted that, as the action of cocaine becomes more generally understood, and the best means of meeting the toxic symptoms, when they exist, appreciated, fatalities will rarely occur at the hands of competent persons ; whereas, with chloroform, and, to a lesser extent, with ether, the experience of the past will practically be the experience of the future.

We are in hearty accord with the author when he presses the claim of cocaine as the anæsthetic in strangulated hernia, especially if the patient be advanced in years, or the strangulation of some standing; the diminished shock and lessened pulmonary irritation (ether) would seem to give the patient a distinctly better chance for life.

Dr. Manley deals with the subject of local anæsthetics and analgesias, locally applied, the indications and technique for local anæsthetics, the method of employing cocaine in the different departments of surgery (operations and injuries), the dosage for the different parts of the body, as well as the steps to be taken in case an overdose be administered.

We advise those in the habit of employing cocaine as a local anæsthetic to read the book.

A MANUAL OF MODERN SURGERY, GENERAL AND OPERATIVE. By John Chalmers DaCosta, M.D. Demonstrator of Surgery, Jefferson Medical College, Philadelphia ; Chief-Assistant Surgeon, Jefferson Medical College Hospital ; Surgical Registrar, Philadelphia, etc. One very handsome volume of over 700 pages, with a large number of illustrations. (Double number) price, cloth, \$2.50 net.

In his preface the author explains that "the work seeks to stand between the complete but cumbrous text-book and the incomplete but concentrated compend" ; that the effort has been to present the subject in a form useful alike to the student and the busy practitioner. Ophthalmology, gynæcology, rhinology, otology, and laryngology have not been considered. Only the specialist is competent to write upon each of these branches. In orthopædic surgery are discussed those conditions which must, in the very nature of things, often be cared for by the surgeon or general practitioner.

Dr. DaCosta, in his "Manual of Modern Surgery," supplies us with what is largely a compilation—a good compilation—of the recent contributions upon this subject. The work is suggestive, not exhaustive ; too suggestive for a student who has no previous knowledge to draw upon, not sufficiently exhaustive for the practitioner who, after he has expanded the means usually relied upon, is looking anxiously for further light, that he may be enabled at once to save his patient and protect his reputation. The elimination of so much surgical work on the ground of its being specialized materially reduces the value of the work to the rank and file of the profession. In the main, the descriptions of the operative procedures discussed are clear, though brief, but we miss the indications for the different forms of treatment suggested, and also some caution as to the dangers to be encountered, with a hint as to the best way to meet them, as well as suggestions upon the important subject of after-treatment.

The book has a decided value, but chiefly to the graduate of some years' standing, who is honestly endeavoring to assimilate the many important lessons of modern surgery. What adverse criticism we feel called upon to offer is directed against what the book does not, rather than what it does, contain.

ASEPTIC SURGICAL TECHNIQUE, with especial reference to Gynæcological operations, together with notes on the technique employed in certain Supplementary Procedures. By Hunter Robb, M.D., Professor of Gynæcology, Western Reserve University, Cleveland, Ohio. Illustrated by 25 plates and 47 woodcuts. Crown 8vo., 246 pages. Philadelphia: J. B. Lippincott & Co., 1894.

Dr. Robb has done the American surgeon of to-day good service in providing him with a work upon antiseptic surgical technique which, while modest in size, contains all the specific directions necessary to a complete handbook in his special department.

The surgeon commonly finds it no easy matter to convince assistants who have not enjoyed the advantages of a bacteriological training of the real importance of each step of the accepted technique of to-day. This work will assist him, and, presenting the details in a most usable form, is likely to become the popular handbook upon this subject.

The title of the book is, to some extent, misleading, for the author has stepped aside from his subject, and introduced useful chapters upon anæsthesia as an aid to diagnosis, examination of the interior of the female bladder, and catheterization of the ureters (being an account of Howard Kelly's recent work), bacteriological and clinical examinations in surgery and gynæcology, and pathological examinations.

The work proper includes chapters upon bacteriology, sterilization, materials and their preparation, drainage, instrument cases and other furnishings, post-operative care, operations in private houses, where the technique must be more or less imperfect.

The usefulness of the book would have been increased had the technique of general surgery received some attention, yet this was hardly to be expected from a pure gynæcologist, and a technique which will stand the gynæcological test, while it must undergo some modifications in the matter of dressings, etc., will, in point of security, meet the requirements of general surgery. Altogether, the book is a most satisfactory one, reflecting credit upon author and publisher alike.

A TEXT-BOOK OF THE THEORY AND PRACTICE OF MEDICINE. By American teachers. Volume I. Philadelphia: W. B. Saunders.

This work, as the preface sets forth, is a practical one, and, therefore, will be looked forward to by the general practitioner with great interest. Professor William Pepper, the editor, has associated with him many of the most eminent teachers of medicine on this continent. The first volume is composed of articles written by Billings, Pepper, Whittaker, Thompson, Wood, and Osler. The work opens with a very thorough article on hygiene; disinfection receiving special attention. The rest of this volume is taken up with the discussion of

the specific infectious diseases and diseases of the nervous system. The work is freely illustrated. The practising physician will find this text-book, as it is called, to represent the present-day treatment of the leaders of the American profession. Amongst the articles on specific infectious diseases, we specially note that on influenza as giving information which, as yet, is not common to the ordinary text-books. The bacillus of Pfeiffer, the micro-organism which is now accepted as the effective cause of influenza, has never been shown to be present in any other malady. It is found most abundantly in the sputum, and also in the blood. A full description of the bacillus with methods of differential stain will be found in this article.

All physicians who have had much experience with pneumonia as a complication of influenza will appreciate the author's remarks regarding its symptoms and physical signs, its insidious onset, the tendency to spread, the feebleness of the respiratory murmur, both before and after consolidation, as well as great abdominal distension, and a typhoid state, characters which have led to an erroneous diagnosis of enteric fever. We might also add the bright red appearance of the sputum, often seen throughout the attack in place of the usual rusty or prune juice expectoration.

Under the head of scrofula, W. Gilman Thompson devotes a chapter to the morbid condition characterized by inflammatory enlargement, with caseation or suppuration of the lymph glands, and tending to tedious inflammations of the skin, mucous membranes, bones, and joints.

Actinomycosis and anthrax are both fully dealt with by Whittaker. The colored illustrations are good.

Under the vaso-motor and trophic disturbances, by Dr. Osler, will be found short accounts of Raynaud's disease, angio-neurotic œdema, acromegaly, and scleroderma, a description of which one will look for in vain, except in the very latest text-books. We have no hesitation in recommending this work as a very valuable addition to any physician's library.

Medical Items.

DR. L. F. BARKER is still at Johns Hopkins, working chiefly at pathology.

DR. T. H. HALSTED (Tor., '87) was in Toronto, December 28. He was on his way to his home in Syracuse.

DR. L. M. SWEETNAM, of Toronto, left for Baltimore, January 14th. He will remain there two or three weeks as the guest of Dr. Howard Kelly.

DR. OSLER, of Baltimore, delivered an address at the formal opening of the new building of the Medical Faculty of McGill University, January 8th. After spending a couple of days he paid a short visit to Toronto.

DR. FRANK BEEMER (Tor., '84), who has been one of the assistant physicians in the Asylum for Insane, Hamilton, for some years, left that city, December 27, for London Asylum, where he is likely to remain for some time.

DR. JAMES T. CAMPBELL (Tor., '89) passed through Toronto, December 24, on his way to Whitby, where he spent a few days at his old home. He reports favorably of the Toronto contingent in Chicago—all well, and doing well.

DR. THOMAS S. CULLEN, who had been spending a portion of his holidays as a guest of Dr. Sweetnam, went to Baltimore with the doctor. Dr. Cullen is likely to remain at Johns Hopkins Hospital for at least two years longer.

DR. J. ALGERNON TEMPLE and Dr. Albert A. Macdonald have formed a partnership, which will not include their ordinary practices, but simply the work in Bellevue House, which has been more generally known for some years as Dr. Temple's Private Hospital for Diseases of Women.

THE first issue of the *Canadian Medical Review* is to hand. It is a very neat journal. The staff, consisting of Drs. W. H. B. Aikins, A. B. Atherton, J. H. Burns, G. Sterling Ryerson, J. Ferguson, Albert A. Macdonald, and D. W. Montgomery, were all formerly connected with the *Dominion Medical Monthly*, and whose retirement we noticed in our last issue. We wish the *Review* success.

SENSATIONALISM IN PROFESSIONAL JOURNALS.—The praiseworthy effort of the *British Medical Journal* to expose the scandals connected with the notorious massage establishments of the metropolis is somewhat marred by the manner in which the subject is laid before its readers. To the professional man, to whom alone the *British Medical Journal* should appeal, such an exposure would be quite as valuable and conclusive if set forth with somewhat less blatant flourish of trumpets, and if unaccompanied by the accessories of special type and somewhat spun-out details. If the case is a good one, as against many of these establishments it doubtless is, it can answer no good purpose to give this so-called report of the "commission" such a prominence in a periodical which lies on the table of many a public library and scientific institution where others than medical men may be impelled by curiosity to read the details of this, the latest scandal. It is but too likely that such a report, while it damages the business of the honest establishments, gives an additional advertisement to those which it is intended to suppress. In any case, this kind of departure from the sober current of professional news, information, and comment, seems hardly worthy of the official organ of a great association. It suggests the kind of journalism which finds its expression in certain of the evening and Sunday papers, which we hardly look up to as models for our imitation.—*Medical Magazine*.

MUNIFICENT GIFTS TO COLUMBIA UNIVERSITY.—Within the last six weeks Columbia University has received gifts for new buildings representing more than a million dollars. In addition to the two buildings at Bloomingdale, for which \$500,000 was given some time ago by, as yet, secret benefactors, provision for a number of buildings for the College of Physician and Surgeons has been made by members of the Vanderbilt family, in the sum of \$350,000. The Vanderbilt clinic on Sixtieth street will be enlarged by the erection of a building five stories high and 100 x 50 feet. Another building, 50 x 80 feet, will be erected on Fifty-ninth street, east of the present main building.

Another important gift in connection with the medical school is one of \$200,000 from Mr. and Mrs. William D. Sloane for the enlargement of the Sloane Maternity Hospital to nearly double its present size. Mrs. Sloane has also agreed to provide the additional money necessary for the maintenance and endowment of the enlarged institution. The new building will have a front of seventy feet on Fifty-ninth street.

These new buildings will completely fill the Fifty-ninth and Sixtieth streets fronts of the block occupied by the medical school, and will provide an equipment for Columbia far in advance of any other American medical school. The architects are already at work on the plans, and construction will be begun without delay. The property and the main building of the College of Physicians and Surgeons were given by the late William H. Vanderbilt; the clinic bearing his name was erected as a memorial by his children; while his daughter, Mrs. Sloane, endowed the maternity hospital.—*Medical News*.

CARE OF THE MOUTH IN SICK PERSONS. — Rosenbach says that in many illnesses there is almost sure to be secondary trouble in the mouth if preventive measures be not taken (*The British Medical Journal*). A warning sign is dryness and redness of the tongue and mucous membrane of the mouth, with difficulty in swallowing; further signs are an evil odor from the mouth, coated tongue and gums, bleeding of the gums, etc. Just as special care of the mouth is required in patients with carious teeth, smokers, and chewers of tobacco, so it is also in the case of unconscious or paralyzed persons; patients with fever or suffering from chronic digestive complaints; those taking medicines, such as mercury or iodides, or who, on account of general weakness, have to take strong alcoholic drinks; but, perhaps, the most important class of those in whom special care of the mouth must be taken are patients with fever. Parasites are always present in the mouth, but it is only when the tissues are weakened that they undergo invasion by these parasites, which become then really pathogenic. There is nothing which one can do for sick persons which is unimportant, and by neglect in the care of the mouth convalescence may be retarded. Rosenbach concludes with the following rules: (1) Patients with good digestive powers, free from fever, and with no loss of consciousness require no more than the ordinary care of the mouth. (2) In children and very old patients the less solid food taken the greater should be the care with the mouth. They should rinse the mouth out several times a day with lukewarm water containing a little common salt, tincture of myrrh, or eau-de-Cologne added to stimulate secretion. When there is a tendency to bleeding of the gums, or when the teeth are bad, a pinch of powdered boric acid may be twice daily rubbed in between the lips and gums. Patients with false teeth should remove their false teeth when, owing to the loss of appetite or chronic gastric disturbance, they cannot take solid food. (3) In patients with partial loss of consciousness the mouth should be examined several times a day for small sores, such as may arise from the pressure of the teeth on the lips, etc. Such sores should be powdered with a little boric acid or chlorate of potash, and the cracks at the corners of the lips heal quickly if dried with a clean towel and treated with boric acid or vaseline. The mucous membrane may be stimulated by wiping the tongue and mouth, and pressing on the tongue with a moist towel every two or three hours; if necessary, the hinder part of the tongue should be cleaned with a wad of cotton-wool fastened to a stem. If the patient sleep with the mouth open the air in the room must be kept moist; a moistened layer of muslin laid on the mouth may be of some service. (4) Patients with fever should have something to drink—cold water or weak lemonade—at least every hour; one must not wait until the patient asks for drink. Besides preventing dryness, the fluid maintains the activity of the glands and the whole function of the mucous membrane. Many patients are prevented from drinking by a painful, dry, and cracked condition of the lips, and therefore all feverish patients should, from the commencement of their illness, have their lips rubbed several times a day with vaseline or fat. In protracted cases of fever the mouth may also be swabbed out with oil, fat, or greatly diluted glycerine.—*N. Y. Medical Record*.

OBITUARY.

EDWARD AARON MCGANNON, M.D.—We learn from the *Montreal Medical Journal* that Dr. E. A. McGannon, of Brockville, died in the month of October last, at the age of 41. He graduated at McGill University in 1881, and, after practising for a time in Lowell, Mass., removed to Brockville, where he soon built up a large practice. He was Grand Trunk surgeon at Brockville, and last year was elected vice-president of the Association of Railway Surgeons of North America.

DR. WITHERS MOORE, D.C.L., M.D., F.R.C.P.—Dr. Withers Moore was one of the best known physicians in the south of England. In his earlier years after graduating he practised in Doncaster, Yorkshire, but removed to Brighton in 1841. Patients came slowly for a few years, but, almost suddenly, fame and success reached him. He was a prominent and active member of the British Medical Association, and was vice-president of that society at the time of his death, which occurred December 5, after a few days' illness, from angina pectoris. He was seventy-one years of age.

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EDITOR:

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ASSOCIATE EDITORS:

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EDMUND E. KING, M.D. Tor.

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Original Communications.

PATHOGENESIS OF SIMPLE GASTRIC AND DUODENAL ULCERS.*

By DR. W. J. GREIG, B.A., L.R.C.P. LOND.,
TORONTO.

THIS specimen of a perforating duodenal ulcer was removed from the body of a man aged 57 years, a laborer by occupation. He was seized with a severe cramp (as he called it) in the bowels at 10 p.m., and in twenty-four hours was dead. Up to the time of his seizure he had enjoyed the best of health. He had suffered from no symptoms of indigestion, and had worked full time on the day, preceding his death. There was absolutely nothing in the previous history to give a clue to the condition found post-mortem. The disease was essentially latent in character.

This paper is undertaken with the view of discussing briefly some of the theories which have been advanced to account for these ulcers, and

* Read at open meeting of the Toronto Pathological Society, Jan. 25th, 1895.

also in the hope that a discussion will be started which will elicit much valuable information. With tubercular, cancerous, and diphtheritic ulcers this paper has nothing to do. We propose to discuss simple ulceration alone.

In the production of duodenal ulceration, the same causes operate as in gastric. They are peptic in origin ; that is to say, they are produced by the action of the gastric juice on the mucous membrane. The truth of this statement is, to my mind, demonstrated by the fact that these ulcers are not found lower in the duodenum than the biliary papilla, where the alkaline bile flowing into the bowel neutralizes the acid secretion of the stomach. Samuel Fenwick has suggested that the different nature of the ulcers found below the orifice of the bile duct is due to the greater development there of the lymphatic system. It is implied in this that the gastric juice has no particular influence in the production of gastric ulceration, that these ulcers are all inflammatory, and that they would be more frequent in the lower bowel if the irritants producing inflammation were not more effectually carried off by the lymphatics.

That the gastric juice is capable, however, of producing ulceration is shown in the fact of the post-mortem digestion of the stomach. It may be objected to this that the post-mortem stomach is dead tissue, but the condition of that particular part of the stomach wall subsequently ulcerated is in a condition of lowered vitality from some cause. The difference between it and dead tissue is of one degree only.

Granted, then, that these ulcers are peptic in origin, it may be very justly asked, Why is not the healthy stomach digested? It might with equal right be asked, Why does not the pancreatic secretion digest its own cells, duct, or the duodenum into which it empties? Why does it limit its action to the contents of that canal? Going to the invertebrata for an example, Ewald has pointed out that there is a mollusc, the *dolium galea*, which secretes harmlessly to itself pure sulphuric acid, while the dead animal is at once destroyed by that acid. Can we tell why this is so? The only answer that can be given at present is that the stomach is protected by the healthy action of the living cell. Cell life and action of each viscus varies with the nature of the work it has to perform, and so long as this healthy vital action exists we need fear nothing.

Pavy, in 1868, asserted that the stomach was protected by the alkalinity of the blood. Cohnheim accepted this and elaborated it, pointing out that malignant tumors of the stomach were protected and enabled to grow by their profuse alkaline blood supply. That this cannot be accepted as a reason is seen in the following facts :

(1) The superficial layers of the mucous membrane are not alkaline, but acid in reaction.

(2) Samuelson has shown that the blood may be made acid, yet ulceration does not occur.

(3) There is an inconsistency in the doctrine, because an acid juice impinging on an alkaline mucous membrane would either become alkaline itself, and thus lose its digestive powers, or render the mucous membrane acid, in which case the theory would not hold.

It is evident, then, that other factors are necessary in the production of gastric ulceration. What are they?

Let us look briefly at the effect of traumatism of various kinds. Ewald relates the case of an American sailor who, in the course of ten years, had swallowed the whole or part of thirty knives. After death there was found in the stomach thirty pieces of knife blades, together with parts of handles, but no sign of recent or old ulceration. This case shows how much a healthy stomach will stand. Ulceration has, however, been produced by rough sounding, by the ingestion of hot food and drink, by corrosive poisons, by violent vomiting. Ulceration has also followed external violence, a blow or fall. Habershon points out that tailors, weavers, and shoemakers often suffer from this disease, probably due, in part, to pressure on the stomach in the course of their work. Rassmussen, in 1887, found furrows or grooves in the mucous surface of the stomach, produced by the pressure of the costal edges in tight lacing. It is, however, a well-recognized fact that the majority of ulcers produced in this way heal readily, thereby differing from the chronic, in which healing is so slow and relapse so apt to occur.

In view of this, the question becomes not so much what produces these ulcers as what prevents them from healing. In this connection certain experiments on animals are of interest. Schiff produced ulceration by an injury to the anterior corpora quadrigemina. Koch and Ewald did the same by a partial section of the spinal cord. Panum, and afterwards Cohnheim, and many others, by introducing multiple emboli into the gastric arteries. Daettwyler made the observation that ulcers produced in these various ways healed readily, but in cases where the animal was rendered anæmic previously by repeated venesections, or where hæmoglobinuria had been produced by artificial means, the ulcers healed very slowly. This latter observation is one of special interest to us, agreeing, as it does, with our clinical observation of these cases in practice. Gastric ulceration occurs most frequently in young adults suffering from anæmia, or some of its kindred states, and it is very slow to heal.

The course of these ulcers occurring in anæmic individuals may be briefly described as follows: An injury is received by the mucous membrane of the stomach, either by internal or external means. This is generally followed by a follicular hæmorrhage into the stomach wall, which prevents proper nutrition of that spot. The gastric juice acting on this

produces an ulcer, which is retarded in healing, owing to the defective nourishment supplied by the blood, assisted by the hyperacidity of the gastric juice, of which we will speak later.

At this point an interesting question is presented : Whether it is necessary or not to assume the occurrence of an injury to the mucous membrane previous to the formation of an ulcer? Retinal hæmorrhages occur not infrequently in anæmia. It has been asserted that these hæmorrhages occur in the stomach as well without an injury.

With a view of clearing up this question, Soltau Fenwick undertook certain experiments on animals in the way of producing an artificial anæmia by the introduction of chemicals into the blood. He found that ulcers were produced, that these ulcers gave evidence of antecedent hæmorrhage, but were invariably multiple, and were more frequent at the fundus. Thus they differed from the ordinary clinical ulcer, which is, in the majority of cases, single, and generally at the pyloric end of the stomach.

Virchow's explanation of the cause of these ulcers has gained general acceptance in the past. Briefly stated, it is as follows : "A hæmorrhagic infiltration into the walls of the stomach occurs as the result of a local disturbance to the circulation, followed by solution by the gastric juice. The diseases of the blood vessels of importance in this connection are embolism and thrombosis, atheromatous, fatty, and amyloid degenerations, obliterating endarteritis, aneurismal and varicose dilatations, compression of the veins in vomiting, and in gastralgia, congestion following portal congestion." The chief argument against the embolic theory, on which Virchow laid the greatest stress, is the fact that where gastric ulcers occur there is no known source of embolism, and where there is a source of embolism, as in vegetative endocarditis, gastric ulcers are seldom found. The walls of the stomach are particularly free from embolism. In 112 autopsies performed by Dr. Johns at the London Hospital on cases of ulcerative endocarditis, 62 per cent. of the cases had embolism in other organs, but none in the stomach. Welch states that a convincing case of embolism as a cause of gastric ulcer has never been published. Janeway's case, published in 1871, was the nearest approach to it. He found an embolism of the gastro-epiploic artery, which was continued into the nutrient artery of an ulcerated piece of stomach. That embolism is, however, capable of ulceration has been shown by numerous experiments, but these same experiments have also shown that these artificial emboli attack the fundus of the stomach, whereas the round, simple ulcer generally attacks the pylorus. Embolism as a cause, except in very rare cases, may be practically excluded. It has been found in one case of duodenal ulceration.

Thrombosis as a causative agent has more to support it. It is generally associated with some disease of the blood vessels, some

atheromatous or other degeneration. The effect of such a change is a chronic malnutrition of the mucous membrane. Thrombosis may occur if the blood current is slow or the intima of the blood vessel is diseased. Sooner or later, hæmorrhage occurs in the stomach walls, followed by digestion by the gastric juice. This is a very common cause in elderly people with degenerative changes in the vascular system. These ulcers are very slow to heal on account of the malnutrition. Norman Moore, of St. Bartholomew's, has reported a number of cases associated with atheromatous and fatty changes in the arteries. Welch found an extensive obliterating endarteritis in one case. Powell and Hauser found small aneurisms in the floor of gastric ulcers. All the other changes mentioned have been found associated with the condition under discussion.

Another theory which has been discussed is that gastric ulceration is produced by the excessive secretion or excessive acidity of the gastric juice. Wilson Fox, in "Reynold's System of Medicine," first made this observation, the occasion of it being the production of a gastric ulcer by a dose of hydrochloric acid. Reigel is the modern apostle of this doctrine. He claims that in forty-two cases treated by him hyperacidity was present in all. On the other hand, Gerhardt, Rosenheim, and Ewald have all reported cases in which hyperacidity was not present. In view of the opposing testimony, we can only conclude that hyperacidity is a frequent but not an invariable accompaniment of gastric ulceration, and is just as likely to be the result as the cause of that condition. Its presence, however, would have a great effect in retarding the healing process.

I wish to say a few words on the relationship of burns of the skin to duodenal ulceration. The attention of the profession was drawn to this relationship years ago by Mr. Curling. Afterwards Mr. Holmes collected a series of cases at St. George's Hospital, in which, out of 125 deaths from burns, there were 16 cases of duodenal ulceration. A recent collection has been made (of the cases) at Guy's, covering the last fifty years. One hundred and forty-nine cases of burns were examined, and in only five was there any duodenal ulceration, *i.e.*, a proportion of one in thirty.

The association of septic conditions with duodenal ulceration was long ago suspected by Billroth. Two recent writers, Drs. Perry and Shaw, have lately collected 18 cases in which this association was present. In 10 there were sloughing of the skin or cellular tissue. The origin of the sepsis in the other cases was otitis media, perineal abscess, empyema, perinephritic abscess, hip-joint disease, etc. The explanation of the relationship is as follows: It has been long known that congestion of the mucous membrane of the alimentary canal, with petechiæ under the mucous and serous surfaces, takes place in septic processes. These petechiæ, occurring between the pylorus and the biliary papilla, are acted on by the

gastric juice, and typical duodenal ulceration is produced. A distinction must be pointed out between the redness and congestion of the alimentary tract produced by the backward pressure of heart disease and cirrhosis of the liver and that produced by septicæmia. The former process is very rarely accompanied by ulceration, the latter very frequently. The reason lies in the virulence of the septic process causing a greater impairment of the vitality of the tissues, which thus more readily break down under the influence of the gastric juice.

It was known by Mr. Curling that burns also were often associated with congestion and ecchymosis of the alimentary tract. He observed, however, that the ulcers were limited to the duodenum, and, not being cognizant of the influence of the gastric juice, he concluded that the congestion and ecchymosis had nothing to do with the formation of the ulcers. A Dr. Hunter has shown that by subcutaneous injection of certain poisons under the skin of dogs, an ecchymotic and occasionally an ulcerated condition of the duodenum has been produced. In view of these circumstances, and of the fact that the proportion of duodenal ulcers in burns is about the same as in septicæmia, and in view of the fact that absorption of septic matter does occur sometimes in burns, the writers before referred to conclude that the duodenal ulceration associated with burns is septic in origin, and is produced by the action of the gastric juice on the devitalized tissues.

NOTES ON CERTAIN FORMS OF PERIPHERAL LESION IN INFANTILE PARALYSIS.*

By A. PRIMROSE, M.B., C.M. EDIN.,

Associate Professor of Anatomy, University of Toronto; Surgeon Outdoor Department,
Toronto General Hospital; Surgeon, Victoria Hospital for Sick Children.

THE following remarks are confined wholly to certain gross manifestations in infantile paralysis; the microscopic appearances are not described. A dissection was made of a leg amputated at the knee-joint. The indications for the operation were that the limb was absolutely useless—a “dangle-leg”: the child had completely lost muscular power over it, and was unable to walk on crutches, because, although the limb of the opposite side was healthy, the dangle-leg would swing forward with the body at each step, and would knock the crutches from under him. The child was a boy thirteen years old who had suffered at an early age from infantile paralysis, which left him in the condition specified. The dissection of the amputated limb revealed a condition of extreme atrophy. The muscle (fig. 1) was very much wasted, and was almost wholly represented by fibrous tissue with a few muscle elements interspersed among the fibrous bundles. Thus, in the figure, the gastrocnemius is represented, cut and turned aside with the plantaris; the soleus muscle is exposed with its connections unsevered, the tendo-Achillis and the structures at the inner ankle are exposed. Several features are worthy of special note. There appears to be little or no fat in the substance of the muscles themselves, and a remarkably small quantity between the muscles; on the other hand, the subcutaneous fat is very abundant. By actual measurement it was found that the layer of skin, plus subcutaneous fat in the middle of the calf, was one-half inch in thickness, the total thickness of the limb two and a half inches; or, in other words, the total thickness of the limb was made up of, muscle and bone, $1\frac{1}{2}$ inches, with skin and subcutaneous fat, 1 inch. The circumferential measurements in the middle of the calf were as follows—total circumference of limb, $7\frac{1}{2}$ inches; after denuding the limb of fat and subcutaneous tissue the circumference was $4\frac{1}{4}$ inches, the latter including merely the muscles and bones.

*Communicated to the Pathological Society of Toronto.

There seemed to be, therefore, proportionately undue development, or, rather, a remarkable absence of atrophy in the subcutaneous fatty tissue.

The dissection further showed a very definite atrophy in the nerves distributed to the parts ; thus the posterior tibial nerve was represented by a mere thread of tissue. The vessels, too, were much diminished in size. The conditions described in this limb are those usually described as occurring in infantile paralysis, with the exception of the extraordinary development of the subcutaneous fat. The condition here found may be unusual, and may not be typical, but it proves that certain statements made



Fig. 1.

concerning these lesions are not of universal application. Thus the writer in Keating's *Encyclopædia*, on Diseases of Children, makes the following statement in regard to the nutrition of the parts : "The skin becomes adherent to the connective tissue underlying it, and when one attempts to pinch up the skin it cannot be separated from the tissue as in the healthy skin, but the whole mass is brought up together." One is apt to believe that the writer referred to based his conclusions on the clinical phenomena, and has not had due regard to the pathological evidence as arrived at by dissection. Considering it from an anatomical standpoint, one would be inclined to

think that the undue development of the subcutaneous fat produces the condition which prevents one from pinching up the skin and separating it from subjacent structures. The fat is developed in the meshes of the subcutaneous connective tissue, atrophy of this fatty tissue flattens out this meshwork, permits of the demonstration of the subcutaneous tissue in a membranous layer, and allows of free mobility of the skin. On the other hand, undue development of the subcutaneous fat opens out the meshwork, so that the subcutaneous fascia is no longer membranous, but is enormously thickened and its fibrous character masked. Under such circumstances the skin moves with the fat, and is not lax and mobile, but would give one the impression of being attached to the deeper parts. One cannot see why the skin should become attached in the manner suggested by the writer referred to. In fact, the clinical phenomenon referred to by this writer of the immobility of the skin, and the evidence afforded by the dissection described in this paper, would point to a condition of affairs in infantile paralysis in which the subcutaneous fat is either unduly developed, or, at all events, does not take part in the general atrophy of the tissues of the limb.

This condition of the subcutaneous fat in infantile paralysis opens up an interesting question as to the primary lesion in the anterior horns of grey matter in the spinal cord, and the effect of their involvement on the trophic nerves distributed to the subcutaneous fat. Gowers, in speaking of vaso-motor and trophic disturbance in the spinal cord, and more particularly of the changes in the nutrition consequent upon such conditions, remarks that "the changes in the nutrition of the skin, if slight and chronic, resemble those produced by disease of the nerves, and suggest disease of the *posterior* roots." In thus relegating the trophic nerves for the skin to the *posterior* roots, it would seem reasonable to suppose that in *anterior* poliomyelitis the skin and probably the subcutaneous tissue would escape, and would not take part in the atrophy affecting the muscles. The growth of bone is retarded in infantile paralysis, a fact demonstrated in the case under discussion, as the limb of the affected side was much shorter than its fellow. Concerning this "retardation of growth," Gowers states that "there is scarcely sufficient ground for calling it an atrophy comparable to that of the muscles."

The considerations thus submitted concerning the condition of the subcutaneous fat in infantile paralysis would lead one to suggest that the usually accepted statements regarding it are incorrect. The case presented proves that these statements are, at all events, not universally true, and we believe that further investigation will show that the subcutaneous fat does not undergo atrophy in such cases.

HEMIATROPHY OF THE TONGUE.—The figure (No. 2.) represents a reproduction from a photograph of this interesting condition, occurring in a boy nine years of age. There is no paralysis of sensation. The tongue is shrivelled, and presents a number of furrows and rugæ which are observed in the figure. The interest in the case is the fact that the condition is wholly restricted to the hypoglossal of the left side ; there is no other pathological lesion indicated, and it is apparently of central origin. The disease is rare at this early age. We are inclined to look upon the condition as one of infantile paralysis. Eighteen months ago the boy suffered from an attack of this disease, which ran a typical course, as the



Fig. 2.

following history indicates. In August, 1893, he was confined to bed on account of severe pain, which began in the epigastrium and spread until the back, neck, arms, and legs were involved, he was feverish and lost the strength of his limbs, so that he was unable to walk. The weakness continued until the following October, when he began to recover the use of his limbs, and early in that month he was able to walk a little, but the right leg was "drawn up" and he was lame. He regained strength completely on the left side, but the right side continued weak, and it was noticed that the right thigh and leg were smaller than those of the left side. At

present the only indication of the affection of the limbs is found in the circumferential measurements, the thigh and calf of the right limb being three-quarters of an inch less in circumference than those of the left side. The tongue first attracted attention in May, 1894, when the mother observed two notches about its centre, and this gradually extended until one-half of the tongue became shrivelled. The hypoglossal nucleus is the direct continuation upwards of the cells of the anterior horn of grey matter in the cord, and this case seems to illustrate a condition similar to that commonly associated with anterior poliomyelitis. Hemiatrophia of the tongue of *central* origin is not an extremely rare condition in the adult ; it is, however, rare at any age as the result of a *peripheral* lesion. A very interesting case of the latter variety was presented by Dr. Birkett, of Montreal, before the Ontario Medical Association at Toronto in 1890.*

* *Montreal Medical Journal*, March, 1894.

SYMPHYSIOTOMY.

BY G. P. SYLVESTER, M.D.,
TORONTO.

THE literature of symphysiotomy is so limited that I think it behooves every physician having cases to report them, believing as I do that there have been many infantile lives sacrificed by embryotomy which might have been saved had symphysiotomy been an established operation. The operation is not by any means new, as we are told that it was performed over a hundred years ago, and, while it fell into disrepute at that time, its practise is now an evidence of the advancement that has been made in surgery during the past few years. This has largely been brought about by the use of antiseptics, and the increased facilities for operating. The boldness in operating, which grew out of the success made possible by this principle, induced surgeons to throw off the shackles and fears of the past, and apply the light of the present to this as to other operations. In symphysiotomy we have, in my judgment, an operation that will largely supersede the more formidable operations of Cæsarean section and embryotomy. At the same time it must be admitted that there are cases where Cæsarean section is the only measure left to relieve the patient, and there are other cases where embryotomy is preferable to either. The Cæsarean operation is demanded in cases where the conjugate diameter is less than two and a half inches, or where there is a laterally distorted pelvis, or where an exostosis may exist that will exclude all possibility of delivering foetus *per vias naturales*. Embryotomy is preferable to either in cases where the foetus is not living, also in hydrocephalus, or in cases where the consent of the patient or her husband to symphysiotomy cannot be obtained. I might here add that such consent is absolutely necessary in all cases of the operation of symphysiotomy, in order to protect yourself from further trouble by legal proceedings for malpractice. However bright the prospects for the operation are in the future, it still remains true for the present that there are cases in which we do not get perfect union. In private practice, therefore, it is essential that we should carefully protect ourselves. Symphysiotomy, as far as I can find out, dates

back to 1777, when the first operation was performed by Jean Rene Sigault. It fell into disfavor until 1886, when it was revived in Naples, but outside of Italy it received but little attention, and it was not until Harris, of Philadelphia, collated the operations that had been performed from 1886 to 1892 that surgeons became favorably impressed, and after that numerous cases were reported in different countries with such good results that it is now no longer an experiment, but an established fact.

The aim of the operation is by a section of the pubic joint to allow separation of the pubic bones, thus increasing the diameter of the pelvis sufficiently to allow the normal delivery of the foetus, which would otherwise have to be sacrificed, so that it is done entirely in the interests of the child, while at the same time, as compared with the Cæsarean section, you are exposing the mother to the least possible danger in order to get relief from her existing condition. By operating on the cadaver, which I have always done on every available opportunity, and which I would advise every physician to practise and become familiar with, as he cannot tell when a case may arise demanding symphysiotomy, I find that the symphysis can be separated from one to two and a half inches without inflicting any injury to the sacro-iliac joints. As a result of this separation, which should in all cases be limited as far as possible, all the diameters of the pelvis are increased, the lateral more than the antero-posterior in actual measurement of the bony parts; but during delivery the space between the pubic bones becomes pressed out by the prominent parts of the foetal head, which gives us a further gain in the conjugate diameter.

The indications. The indications for the operation are a living foetus, a mother and foetus not too much exhausted, and a pelvis contracted to such an extent that it is impossible to deliver the child by either version or forceps. This information can only be obtained by careful measures with pelvimeter, by means of which you are able to estimate very accurately the capacity of the pelvis. If, however, you have not a pelvimeter at hand, you can safely rely upon the index finger as a good guide. If, in making a digital examination, you can with ease reach the promontory of the sacrum, you can rest assured the conjugate diameter is far below what it should be. Thus, by inserting the index and middle fingers into the vagina, if the promontory of the sacrum can be reached, the wrist is then carried forward until the edge of the index finger rests against the lower edge of the pubic symphysis. The index finger of the left hand notes this subpubic point. The fingers are then withdrawn, and measured from the end of the middle finger to the noted point on the edge of the right index finger. This will give you the sacro-subpubic diameter, and, by deducting from one-quarter to one-half an inch to allow for the obliquity of the

symphysis, we get the sacro-pubic or true conjugate diameter. If we find this below two and a half inches, it is not a suitable case for symphysiotomy, and Cæsarean section would have to be preferred. The operation is purely extraperitoneal, and the bladder and urethra lying immediately under or behind the symphysis are the only parts that require careful protection during the operation, and in bringing together the parts after the operation so as not to include a fold of the bladder or a portion of the urethra between the pubic bones. The hæmorrhage, as a rule, is slight, and easily controlled by artery forceps or tampons.

The principal factors that control the success of the operation are careful selection, not attempting it either in a lateral distorted pelvis, or in one with measurements below those I have already mentioned, and the most careful and perfect regard for antiseptics, and above all, if you have decided to operate at all, do it early, and do not allow patient or fœtus to become exhausted by prolonged labor.

Technique of the operation. The method that is received with the greatest favor is the one from behind forward, making it as largely as possible subcutaneous. In this form, the external wound is much smaller, and there is less hæmorrhage and less danger of infection during convalescence, and, I think, less danger of wounding the bladder or urethra. The woman having been anæsthetized, the abdomen is prepared as for an abdominal section. Have the pubes shaved, the abdomen and thighs thoroughly washed and disinfected, and wrapped in aseptic towels, the bladder and rectum emptied, and then apply a strong bandage six inches wide around hips to prevent too much separation of pubic bones. The patient is placed on a table, lying square on the back, knees drawn well up and separated, assisted by nurse on either side. Having all instruments thoroughly antiseptic, an incision with the scalpel is begun in the median line, the knife being passed right down to the pubic bone. A sound or catheter has previously been given to an assistant to press the bladder and urethra down and backwards. You now extend the incision back in the median line to the extent of two and a half inches, taking care not to wound the urethra; all bleeding to be controlled, and the wounded arteries to be ligated. You now pass the index finger of the left hand behind the pubes, and you will be surprised how readily the tissues are separated from the back of the symphysis. If, however, you are not able to separate with the finger, use the handle of the scalpel. This being done, the left index finger is passed up behind the pubic joint, and along it a strong blunt-pointed bistoury; by upward and forward pressure and a slight sawing movement, it passes readily through the cartilage, and immediately the pubic bones separate with a distinct cracking noise. The Galbiati knife has been recommended by some, but, to

my mind, it is too large and takes up too much room, while with a blunt-pointed bistoury I have never yet failed to incise the cartilage with the greatest ease. In cases where ankylosis existed, neither would answer the purpose. In that case I would prefer a chisel or a chain saw. [It would be very interesting and instructive to have some report on the frequency of ankylosis at the pubic joint. Up to date I am unable to get any idea as to how frequently it occurs. In all my operations on the cadaver or living subject, I have never yet come across a case.] The separation that takes place varies from one to two inches, and this will depend upon the amount of force required to deliver the fœtus. As I said before, any hæmorrhage occurring during this stage should be controlled—arterial, by ligatures, and venous-oozing by tamponing with iodoform gauze. Some authors recommend leaving nature to finish the delivery, but it appears to me that, the os being dilated, it is absurd to wait. I immediately apply forceps, and, with care, deliver. At this stage care is necessary not to use too much force, and also to apply traction in the proper direction. The bandage, which has been put on before the operation, supports and protects the sacro-iliac ligaments very much, and I consider it a very necessary precaution in the operation, as injury or laceration of these ligaments is one of the great dangers during delivery. The third stage being completed, we now turn our attention to repairing the wound made necessary by the operation. An antiseptic sound is introduced in the bladder, and given to an assistant to press that organ and the urethra backwards carefully, while the bones are being brought into apposition. This is a most important precaution. Now wash all external parts thoroughly, and suture the wounds with deep sutures of either silk worm gut, or catgut, and cover with iodoform and collodion. This being completed, take a strong strip of adhesive plaster, six inches wide, and long enough to pass half way round the pelvis; and while assistants press the pubic bones tightly together apply this firmly round the pelvis, and over this a strong cotton bandage bound very tightly. A plan which I think better, and which I will use in all future cases, is to take a piece of strong canvas, six inches wide and from ten to twelve inches long, depending on the size of the patient, tack firmly on to two pieces of board, six inches wide and eight inches long, well padded on the inside so that they will rest on either side of the pelvis, extending from the great trochanter to the crest, so that by means of straps across the top of these pieces you can exert as much pressure as you require, and bring and keep together the pelvic bones, and it does not interfere in any way with the dressings. The legs should now be extended and tied together, and patient placed in bed. The after-treatment is precisely what you would recommend in an ordinary puerperal case, and from my observations, if every direction is strictly

carried out, I cannot see (barring complications over which we have no control) why there should not be a great and a glorious future for the operation of symphysiotomy, and hundreds of lives saved yearly that have in the past been sacrificed by embryotomy. In my own limited practice, extending over a period of twenty years, I can look back on half a dozen cases where life has been sacrificed that might have been saved had symphysiotomy been an established operation. There are very few physicians that cared to undertake the Cæsarean operation in private practice, where there are not the facilities we find in hospitals, and consequently they had to resort to embryotomy, being content with sacrificing one life instead of, in all probability, two lives. I am fully convinced that, in the future, when the results of symphysiotomy have been more fully demonstrated, the need of sacrificing even the one life will be a thing of the past. The following case is an evidence in this line:

CASE. Mrs. R., English, æt. 27. Third confinement. I saw the patient for the first time about October 1st, 1894, in Grace Hospital, when I got her history, which was fully substantiated by one of the nurses who had been present at her first and second deliveries, and knew with what difficulty she had been relieved by embryotomy. I made a careful examination, and was at once struck with what ease I reached the promontory of the sacrum, which, upon measurement with pelvimeter, indicated an antero-posterior diameter of $2\frac{5}{8}$ inches, and with a finger, as I before described, $2\frac{3}{4}$ inches; otherwise the capacity of the pelvis appeared normal, but with pelvimeter showed an oblique measurement of $4\frac{1}{2}$ inches, which is below the normal. From these measurements and the history of previous deliveries, I fully made up my mind it was either another case for embryotomy or a proper case for symphysiotomy, to be more fully determined after an examination of the presenting parts when labor began. Labor began on October 9th in the morning, and continued slowly through the day. I had the patient placed in a ward that had been thoroughly fumigated and aseptic. On further examination I found the os dilating slowly, and membranes protruding. The house surgeon called me up about 11 o'clock p.m., stating that pains were very severe, and wished my presence. On arrival, I found the os well dilated, and foetal head high up in the pelvis and not at all engaged; presentation, as far as I was able to judge, was normal, but the head being so far up it was very difficult to say. I saw there was no use waiting longer, as I had already determined from the previous history and from measurements obtained that symphysiotomy was demanded. Accordingly, I proceeded at once. The patient was prepared as already described, placed on a table, and an anæsthetic given by Dr. Gray, the house surgeon; knees well drawn up, and supported by a nurse on either side. I now made an incision in the

median line, beginning about the middle of the pubic joint, and extended backwards about $2\frac{1}{2}$ inches, passing knife directly down to the pubic joint and cutting backwards, taking care not to injure urethra, which was protected by being drawn down with a catheter in an assistant's hands. The hæmorrhage was slight, only one ligature being required, and that was near the base of the clitoris. The index finger was now passed along the posterior aspect of symphysis, when the foetal head could be plainly felt above the brim, and pressing firmly against the pubic bones. It would have been impossible to have used a Galbiati knife in this case, the head was so firmly down on the bone. I now passed a long, blunt-pointed bistoury along my finger, using it as a director and guide. By means of gentle pressure and sawing motion, the cartilage was cut through with ease, also the subpubic ligament. The pelvis opened up at once with a distinct cracking noise, to the extent of about an inch, or as far as the bandage would allow. I now plugged the external wound with iodoform gauze, ruptured the membranes, applied forceps, and slowly and carefully delivered her in about half an hour, child living and healthy; placenta removed, a vaginal douche given of sterilized water and bichloride, about 1 in 5,000; external parts bathed; external wound thoroughly washed with a solution of bichloride, and three deep sutures of catgut; this covered with iodoform and collodion; sound was again introduced into the bladder to press bladder and urethra backwards, so as not to be included between the pubic bones, which were now firmly pressed together, and retained by a long strip of adhesive plaster about six inches wide, extending almost completely round the pelvis; over this a strong cotton bandage bound very tightly; knees were tied together, and patient was now removed to her bed. The recovery was uneventful. There was no rise of temperature or pain, and the treatment recommended was such as in ordinary lying-in cases, with special care only in keeping bandage firm over the hips. If any future case should arise, I would use the side pieces well padded, as I have described before, as being more sure than a bandage. External wound healed by first intention. At the end of the third week, union of cartilage was perfect, but, as a safeguard, Dr. Bremner very kindly applied a plaster of Paris bandage about the pelvis extending from the great trochanter to an inch or so above the brim of the pelvis. I took this precaution in order to support the pelvis more thoroughly until such time as the cartilage would become firmer and stronger, which I think is a very necessary step in order to prevent any fear of motion.

The measurements of the foetal head were: Occipito frontal, $4\frac{1}{2}$ inches; bi-parietal, $3\frac{1}{8}$ inches; weight of child, 8 pounds.

By comparing the diameter of pelvis with the measurement of the foetal head, we find the shortest diameter of head $3\frac{1}{8}$ inches, and conju-

gate diameter of pelvis $2\frac{3}{4}$ inches, a clear $\frac{3}{8}$ inch in favor of the head ; add to this the thickness of the blades of the forceps, I think would preclude all possibility of delivering child *per vias naturales* alive. In this case the catheter was not required to be used after delivery. The following day, after plaster jacket was applied, the patient was allowed to get up and walk about slowly, which she did with the greatest ease and comfort. I have not seen any reference to the use of plaster jacket in these cases, but to me it seems a very necessary precaution. Two days later the patient left, feeling well and strong, accompanied by a healthy boy.

I have delayed reporting this case until such time as I was satisfied with the results, which I am glad to say are most gratifying ; and, from my experience, I can fully recommend symphysiotomy to the faculty's serious consideration, believing, as I do, that by its adoption Cæsarean section and embryotomy will be less frequent, and many lives will be saved that are now sacrificed.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.*

BY L. F. BARKER, M.D. TOR.,

Johns Hopkins Hospital, Baltimore.

THE antitoxin treatment is a final step in a long series of investigations. The principles underlying it are not new; the methods of immunization now in use are not unlike those used by Pasteur in his earlier work, to which he was, undoubtedly, stimulated by the success of Jenner's vaccination. After it was found out that the symptoms and lesions in the infectious diseases were dependent, in the main, on the toxic products of bacteria, it was soon discovered that the chemical toxins formed by the bacteria were capable, when introduced in gradually-increasing doses into animals, of giving rise to an artificial immunity almost as certainly as the inoculation of the virus itself. Those who were attacking the problems of immunity—that is to say, were endeavoring to discover what changes took place in the body of an individual during and after an infection, such as smallpox, which rendered him, after thorough recovery, practically insusceptible to a second attack—studied the fluids and tissues of the body before, during, and after an infection. These investigations led to the formation of two schools: First, that which believes that the normal resistance offered against infection, and the immunity acquired by one attack, or by artificial means, depend upon certain properties of the blood serum; and, second, that which holds that the activity of the cells of the body accounts for the phenomena of both natural and acquired immunity. Dr. Nuttall showed that the blood serum of an animal that had been immunized against anthrax, when injected into another animal, would kill more anthrax bacilli than the blood serum of a susceptible animal. Other investigators proved that the use of the blood serum from an immunized animal would, when introduced into another animal, protect it from infection with the same microorganisms. Then Behring and his assistants demonstrated that the injection of the blood serum of animals rendered artificially immune against diphtheria and tetanus would heal these infections, even after they were well started in other animals. It was easier to understand how it would be possible to set up an artificial immunity against smallpox or typhoid fever than against diseases like diphtheria or pneumonia, for the latter are

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diseases from which an individual may suffer more than once. Immunity has to be looked upon as a relative term, and we may speak of a temporary and of a permanent immunity. An animal into which the bacterial toxins are injected has to suffer a reaction before it becomes immunized; a certain space of time must elapse before the antitoxines are formed. In the most successful method of producing artificial immunity, one begins by injecting small quantities of the well-diluted poisons. One of the most difficult problems in applying the serum therapy to human beings lay in obtaining a serum which contained the antitoxin substance in sufficient concentration, so that not too large quantities would have to be used for injection. Larger animals than those usually experimented upon had to be employed, and the horse has been, for various reasons, selected as most suitable. A small dose of diluted diphtheria toxins is at first injected into the region of the shoulder. The animal is somewhat disturbed, and does not take its food as usual. After several days a second dose is administered, increasing doses producing less effect, until, after a period of from four to six months, the horse is rendered immune, and the antitoxic strength of its serum may have attained a high degree. The serum is tested, from time to time, as to its antitoxic power, and when sufficient concentration has been reached the blood is drawn, the serum separated, standardized, and enclosed in flasks. Behring's so-called normal serum is of such a strength that one-tenth of one cubic centimetre of it will counteract, when injected with it into an animal, ten times the minimum amount of diphtheria poison which is fatal for a guinea-pig weighing three hundred grammes. One cubic centimetre of this normal serum is called an antitoxin unit. Serum No. 1, of Behring, is sixty times as strong as this normal serum, serum No. 2 one hundred times as strong, and serum No. 3 one hundred and forty times as strong. In treating the disease, the earlier the antitoxin is given the better will be the result. Of the cases treated during the first two days, practically one hundred per cent. get well. At first, too small doses were given; now, not less than six hundred units (one flask of No. 1) are given as a beginning dose, and, if the case be very severe, or be seen late, as much as sixteen hundred units may be given immediately. Within twenty-four hours after the injection the pulse, as a rule, is slower, the temperature lowered, and the patient feels better in every way. If the cases are not seen until the third or fifth day, when the organs may already be seriously affected, it cannot be expected that the antitoxin will have such a beneficial effect; it can only counteract the poisons then present; it cannot repair the damage already done. A few relapses have occurred after its use, and some deaths, but these were not, it is claimed, the cases treated from the beginning. Very gratifying statistics come from Germany and France; the mortality rate has been markedly lowered. The disease, Behring states, is now absolutely within the con-

trol of the physician. It was thought, at first, that one-tenth of the ordinary healing dose would suffice to protect those who had been exposed to the disease from contracting it. But it is now recommended that one hundred and fifty units be injected as a prophylactic or immunizing dose. Some curious after-effects have followed its use, such as urticaria and erythematous eruptions, pains in the joints, sometimes accompanied by swelling, but in no instance were these symptoms of serious import. Laryngeal complications, it is stated, do not develop if the antitoxin has been used before they appear. It is claimed that tracheotomy is rarely necessary, and that intubation will answer in those cases where the lar/nx is indicated. The antitoxin is not to be looked upon as a direct chemical antidote, for it does not act against poison in the same manner that an acid neutralizes an alkali; for example, there is evidence in support of the view that the antitoxin acts indirectly by rendering the cells of the body capable of resisting the action of the toxines. The antitoxin for one disease may act, to some extent, in increasing the resistance of the body cells against the toxines of different origin. For instance, while the blood serum of an animal rendered immune against snake poison has no antitoxic effect against the toxine of tetanus, yet an animal which is immunized against tetanus yields a serum which combats the toxic effect of snake poison, and there are other facts adduced which shake our confidence in the specificity of antitoxines. There may be, to a certain extent, an overlapping of the immunities. Diphtheria offers, as Buchner has pointed out, a better opportunity for the study of the effects of a new remedy than does tuberculosis; for, while the former approaches more nearly to a typical infection, the latter is almost a typical intoxication. Again, while tuberculosis runs a protracted course as a rule, and is subject to spontaneous exacerbations and ameliorations, diphtheria is an acute process terminating soon either in recovery or in death, and thus is a disease in which conclusions concerning the efficacy or futility of a given method of treatment may speedily be arrived at. Koch's tuberculin treatment differed from the antitoxin treatment of diphtheria in that in the former a glycerine extract of cultures of the tubercle bacillus were directly injected into the patient, there to set up a reaction which, after a time, was to lead to the formation of healing substances, while in the latter the toxines of the diphtheria bacilli are injected into an animal, the animal suffers the reaction and builds the healing substances, and these are transferred ready-made to the human being. Should the new treatment of diphtheria prove to be as satisfactory as it promises, the outlook for the cure of infectious diseases in general is bright. We shall, however, be compelled to wait patiently until the bacteriologists, to whom all the credit of this new treatment is due, have perfected the arrangements for the application of the serum therapy to the other infectious diseases.

Selected Articles.

LORD NELSON'S PHYSICIAN TO THE FLEET.

BY H. NELSON HARDY, F.R.C.S. EDIN.

NINETY years ago my great-uncle, Dr. Leonard Gillespie, R.N., while serving on board Nelson's flagship, the *Victory*, wrote home a letter commenced in January and finished in March, 1805, giving such a capital description of his life on board, and such charming glimpses of his relations to his great commander, that it was carefully preserved in my mother's family, and in due time handed over to me, with other interesting memorials of our great naval hero and his quondam physician. Dr. Leonard Gillespie was, as his name indicates, of Scotch extraction. In the sixth volume of "Nelson's Despatches and Letters," he is mentioned as being directed, in his capacity as physician to the fleet, to examine, with the captains and surgeons of the various ships, any officer desiring leave of absence on the score of ill-health. I have also found his name mentioned in one of the early editions of Cooper's "First Lines of Surgery." After the peace he lived for many years at Paris, and died among those whom he had long ceased to regard as foes, on 15th January, 1840, aged 84 years. Of the children for whose welfare he expresses his desire in the latter part of the letter, two survived him, one, the son Leonard, dying also in Paris some years after his father, the other, a daughter, then five years old, who still lives at the advanced age of ninety-five, and who, until quite recent years, was one of the best correspondents and neatest letter-writers in the whole family connection.

Dr. Gillespie's letter, which will, I should think, be read with especial interest by naval medical men, runs as follows :

"ON BOARD HIS MAJESTY'S SHIP 'VICTORY,'

"AT SEA OFF THE COAST OF SARDINIA,

"DEAR SISTER,

"7th Jan., 1805.

"I did myself the pleasure of writing to you in great haste on the 29th ult., being at that time on board His Majesty's ship *The Swiftsure*, off the coast of Catalonia, on my way to join this ship, which I

effected on the 2nd inst., and I am at present fully established in my office as physician to this fleet, which is, thank God, in the best possible order as to health, discipline, spirits, and disposition towards our gallant and revered commander, Lord Nelson. As a proof of the state of health enjoyed by the seamen, I may instance the company of this ship, which, consisting of 840 men, contains only one man confined to his bed from sickness, and the other ships (twelve of the line), of from eighty-four to seventy-four guns, are in a similar situation as to health, although the most of them have been stationed off Toulon for upwards of twenty months, during which time very few of the men or officers (in which number is Lord Nelson) have had a foot on shore.

"You will perceive from this account, my dear sister, that the duties of my office are not likely at present to prove very laborious, and my duty as Inspector of the Naval Hospitals will occasion me to visit, as may be found necessary, Malta, Sicily, Gibraltar, and, perhaps, Naples, so that from all appearances, and my experience hitherto, I have no reason to be displeased with the comforts, duties, or emoluments of the office I at present fill, my salary being £465 per annum, and, being situated so as to live in a princely style, free from any expense. This exemption from expense arises from my having the honor of forming one of the suite and family of Lord Nelson, whose noble frankness of manners, freedom from vain formality and pomp (so necessary to the decoration of empty little great men), can only be equalled by the unexampled glory of his naval career, and the watchful and persevering diligence with which he commands his fleet.

"On my coming on board I found that the recommendation which my former services in the Navy had procured me from several friends had conciliated towards me the good opinion of his lordship and his officers, and I immediately became one of the family. It may amuse you, my dear sister, to read the brief journal of a day, such as we here pass it at sea, in this fine climate, and in these smooth seas, on board one of the largest ships in the Navy, as she mounts 110 guns, one of which, carrying a twenty-four pound shot, occupies a very distinguished station in my apartment.

"*12th Jan.*—Off the Straits of Bonifacio, a narrow arm of the sea between Corsica and Sardinia. We have been baffled in our progress towards the rendezvous of the squadron at the Madeline Islands for some days past by variable and contrary winds, but we expect to arrive at our destination to-night or to-morrow morning. To resume, my dear sister, the journal of a day. At six o'clock my servant brings a light, and informs me of the hour, wind, weather, and course of the ship, when I immediately dress, and generally repair to the deck, the dawn of day at this season

and latitude being apparent at about half or three-quarters of an hour after six. Breakfast is announced in the admiral's cabin, where Lord Nelson, Rear-Admiral Murray, the captain of the fleet, Captain Hardy, commander of the *Victory*, the chaplain, secretary, one or two officers of the ship, and your humble servant, assemble, and breakfast on tea, hot rolls, toast, cold tongue, etc., which, when finished, we repair upon deck to enjoy the majestic sight of the rising sun (scarcely ever obscured by clouds in this fine climate), surmounting the smooth and placid waves of the Mediterranean, which supports the lofty and tremendous bulwarks of Britain, following in regular train their admiral in the *Victory*. Between the hours of seven and two there is plenty of time for business, study, writing, and exercise, which different occupations, together with that of occasionally visiting the hospital of the ship when required by the surgeon, I endeavor to vary in such a manner as to afford me sufficient employment. At two o'clock a band of music plays till within a quarter to three, when the drum beats the tune called "The Roast Beef of Old England," to announce the admiral's dinner, which is served up exactly at three o'clock, and which generally consists of three courses, and a dessert of the choicest fruit, together with three or four of the best wines, champagne and claret not excepted; and what exceeds the relish of the best viands and most exquisite wines, if a person does not feel himself perfectly at his ease, it must be his own fault, such is the urbanity and hospitality which reign here, notwithstanding the numerous titles, the four orders of knighthood worn by Lord Nelson, and the well-earned laurels which he has acquired. Coffee and liqueurs close the dinner about half-past four or five o'clock, after which the company generally walks the deck, where the band of music plays for nearly an hour. At six o'clock tea is announced, when the company again assembles in the admiral's cabin, where tea is served up before seven o'clock, and, as we are inclined, the party continue to converse with his lordship, who at this time generally unbends himself, though he is at all times as free from stiffness and pomp as a regard to proper dignity will admit, and is very communicative. At eight o'clock a rummer of punch, with cake or biscuit, is served up, soon after which we wish the admiral (who is generally in bed before nine o'clock) good-night. For my own part, not having been accustomed to go to bed quite so early, I generally read an hour, or spend one with the officers of the ship, many of whom are old acquaintances, or to whom I have been known by character. Such, my dear sister, is the journal of a day at sea in fine or at least moderate weather, in which this floating castle goes through the water with the greatest imaginable steadiness, and I have not yet been long enough on board to experience bad weather.

"18th Jan.—Madeline Islands, off Sardinia. We have been at anchor in this harbor, excellent of the kind, for five days, where we are supplied

with wood, water, wine, provisions, and other necessities, and where I have commenced the duties of my office, without any difficulties to encounter, the business being very familiar to me. It consists in receiving returns of the state of the sick on board from their respective surgeons, visiting the ships as occasion may require, recommending to the surgeons the modes of treatment which to me seem most judicious, causing the surgeons, and the sick under their care, to be supplied with the medicines, refreshments, and necessities which they may require, all which offices are very agreeable to me.

"Before we sail from this place it is likely that a ship may be despatched to England. We are at present at war with the Spaniards. Several very valuable captures have been made from them off Cadiz, but we have not yet experienced any hostilities with them of any consequence inside the Mediterranean. We have not had any arrival from England in this fleet since that of the convoy in which I came, but we expect daily the arrival of a ship of war, which I trust will bring a letter from you, as I requested you in my last letter to write to me under cover to Mr. Stewart, of the office for sick and wounded seamen. I hope the children are all in good health, and that they all make advances at their schooling.

"*22nd Jan.*—At sea, off the southeast end of Sardinia. The sudden arrival of a frigate, which had been stationed off Toulon to watch the motions of the enemy's squadron, on the evening of the 19th, immediately changed the whole system of our operations. This frigate informed us that the enemy's squadron, consisting of eleven sail of the line, had put to sea on the night of the 17th, and had chased the frigate, apparently steering towards Cagliari, the capital of Sardinia. Although in the midst of the operations of wooding, watering, and victualling the fleet, every ship was under weigh in two hours' time, and put to sea through a narrow, rocky channel, never yet well explored by any navigator. Since the night of the 19th we have been contending with adverse winds in heavy gales towards the east side of Sardinia, in hourly expectation of descrying the enemy, and having everything prepared to attack him, with the well-known promptitude and decision of our gallant admiral, the more of whose conduct in dangers and critical situations I am witness to, the more I am forced to admire and revere him. For my own part, I behold with great coolness the enthusiasm of all around me in anticipating the laurels to be gained in the expected battle. I regard such things as necessary evils, in which every man is bound to do his duty to the utmost of his power, and not as matter for any great degree of exultation. The humane and reflecting mind cannot but be struck with the carnage of warfare, and, if to remedy the disasters towards our fellow-creatures encountered in it be the duty of a Christian, I may with reason be satisfied with the part which it is my lot to act in this drama.

"*29th Jan.*—Off Palermo, the capital of Sicily. After scouring the coasts of Sardinia and this celebrated island, the capitals of both which we have passed before in search of the enemy's squadron without finding it, I now write to you, my dear sister, from the foot of Mount Etna, on our way to the famous channel of Messina, which divides Italy from Sicily, which we are to pass in order to continue our pursuit of the enemy, whom our admiral supposes to have sailed, either for the Morea, in ancient (*sic*) Greece, or for Alexandria, in Egypt.

"*30th Jan.*—For two days past we have been cruising off the Pharo, or lighthouse of Messina, between which and the Lipari Islands we have been detained by contrary winds. This range of islands is situated from seven to fourteen miles from the coast of Sicily, and has undoubted marks of having been thrown up by the powerful influence of volcanoes, several of them yet smoking, and the famed mountain of Stromboli (said by poets to be the entrance to the infernal regions) yet continues to flame, explode with noise, and eject from its lofty summit showers of red-hot ashes, stones, and cinders. We were last night within a few miles of this eternal chimney of the inflamed entrails of the earth. The night was dark, and the sea was agitated by a pretty strong gale of wind. The mountain is said to be about three-quarters of a mile in height, and a constant smoke rises from the mouth of the volcano. At intervals, sometimes of ten, sometimes of fifteen, and frequently of only three minutes, we perceived columns of flame, accompanied with masses of red-hot lava, stones, and ashes, to issue from the mountain, ascending to a considerable height, and falling back into the crater, or into the sea, which washes the foot of the mountain. This has been the invariable operation of the volcano from the earliest records of history. The eruptions, though influenced by the state of inaction or eruption of the neighboring volcanoes of Etna and Vesuvius, and by the remarkable change in the atmosphere, yet constantly exhibit the formidable phenomena which I have attempted to describe, differing, however, with regard to frequency and violence. You would scarcely believe, after this, that the island is inhabited, yet so it is. Almost to the top of the mountain people are said to live, neither deterred by the horrid grumbings of the profound abyss of liquid fire, nor by the columns of flame, fire, and smoke which it sends forth, and which are so intense as to enlighten for navigators the distant coasts of Sicily and Italy.

"*31st Jan.*—We this day passed the famous Straits of Messina, with the whole of our fleet, and although the wind was against us we beat through with the greatest ease and safety, notwithstanding the dreadful rocks and shoals, Scylla and Charybdis, celebrated by Homer and Virgil for their terrors to seamen. Our passing through these straits, with ships larger than ever passed them before, must have been a splendid sight to the

inhabitants of the city of Messina, in Sicily, and those of Reggio and Scylla, in Italy, before whom we passed closely.

"*7th Feb.*—Off Alexandria, in Egypt. After a rapid voyage of 360 leagues (1880 miles) we arrived opposite this celebrated city to-day, where we were disappointed in not being able to procure any intelligence of the enemy's fleet, which had not been seen on this coast. We have been all this day reconnoitering this famous city, Alexandria. The pillar of Pompey, the column or obelisk of granite called Cleopatra's Needle, the walls, public buildings, fortifications, and harbors of the place we have been able to view with a good deal of accuracy. They form a strong contrast with the bare and desert sands, which extend from the city along the African coast. We are now, at sunset of a day which for warmth resembles a May day with you, directing our course, under a lofty press of sail, to the island of Malta, on our way back to the French coast.

"*12th March.*—Off Toulon. I resume my pen to inform you that we have arrived at our rendezvous off this port. Having passed the island of Candia, or ancient Crete, on the 12th ult., we saw Mount Ida covered with snow. On the 15th we were off the Morea, in Greece, where we were joined by a frigate, with the intelligence that the French squadron, apparently bound up the Mediterranean, had been disabled in a gale of wind, and put back to Toulon, without effecting any purpose but that of disabling their own ships—a gale which we only regarded as a common occurrence, and one which did not prevent us from sitting down to dinner as usual—and of rendering their unfortunate, half-drowned, fresh-water sailors and soldiers sick to death of the sea. On the 12th of February we were off the capital of Malta, where we only remained a few hours, continuing our course down the Mediterranean, coasting along the island of Sicily, and after a stormy and tedious passage we arrived on the 27th at Cagliari, where we watered the ships, and got a supply of cattle, about seventy or eighty head of oxen being embarked on board the fleet, which was then found, and continues to be, in the best state, there not being more than five or six men confined to bed by sickness; indeed, the weather is so fine and temperate in this climate that it is much more salubrious than a more northern climate. I have not been seated an hour at the fireside since the second week in December, and have not felt the want of it, nor have I been afflicted with a cold since I entered the Mediterranean. I cannot recollect that we have had one day pass in which the sun has not made its appearance, and we have had very little rain, or dark or humid weather. At present we are in hourly expectation of falling in with the *Renown*, a ship which is to go to England, so that I shall be obliged speedily to close this very long epistle, which I sincerely hope may come to your hands in half the time that has elapsed since I commenced to write it.

"The very unexpected news of the commencement of a negotiation for peace, which we received a few days since, gives me great pleasure, and as both parties seem to be convinced that it is their mutual interest to make peace, and allow their subjects to enjoy the fruits of their industry in tranquillity, we may fondly hope that the termination of the war may arrive with as much promptitude as its commencement was unexpected.

"*16th March, 1805.*—Off Barcelona. His Majesty's ship *Renown* is just upon the eve of departure for England, by which I send this, enclosed to my friend Mr. Stewart, Secretary to the Commissioners for Sick and Wounded Seamen. Affectionately remember me to all the children. Let me beg of you not to indulge Leonard too much, but keep him to his book. Do not forget to give them the allowance I mentioned in a former letter for pocket money. Let me hear from you every opportunity. Remember me affectionately to all our friends and relatives, and believe me to be your ever affectionate brother,

"LEONARD GILLESPIE."

—*The Medical Magazine*, London, England.

SOME NOTEWORTHY TOXIC EFFECTS OF THE ANTI-TOXIN TREATMENT IN DIPHTHERIA.

BY A. SEIBERT, M.D.,
NEW YORK.

INASMUCH as Behring's treatment of diphtheria by the hypodermic injection of antitoxic blood serum will, no doubt, be given an extended trial in the near future, it will be of value to carefully report any disturbances in the so-treated patients that are caused by the antitoxin.

The following case, while somewhat resembling those reported by Lublinski, of Berlin, and Scholz, of Hirschberg, in the *Deutsche Medicinische Wochenschrift*, November 8 and 15, 1894, presents additional features which, to my knowledge, have so far not been published :

Lizzie J——, six and a half years of age, complained of illness on November 30th. On December 1st a fresh diphtheric exudate was found to cover the visible pharynx and the nostrils. Lymph nodes swollen ; temperature, 103.5° F.; considerable prostration. In the evening of the same day 10 c.c. of antitoxin (from the Pasteur Institute of this city) were injected, and the same quantity on the following morning. Irrigation (by a 1 to 20 watery solution of the liquor sodæ chlorinatæ) of the naso-pharynx made with a fountain syringe every two hours, by night and day, and frequent gargling with a solution of iodine and carbolic acid, together with the antitoxin, practically cured the child in three days. An infant brother of the patient, aged eleven months, who had to remain in constant contact with his sister, was immunized by the injection of 2 c.c. of Aronson's serum.

The bacteriological report of the Health Department announced the presence of Loeffler bacilli.

To prevent any dangerous exercise, the patient was kept on her back in bed even after the disappearance of the exudate.

December 10th. Nine days after injecting the antitoxin, and five days after apparent complete recovery, a rash appeared in the face and upon the extremities of the child, that in some places (face and neck) resembled

measles and in others, scarlatina. The skin was but slightly infiltrated, nowhere resembling urticaria. The color of the afflicted surfaces was dark red, showing a glossy, shiny appearance. The temperature had risen to 99.5° F., considerable itching, no pains. Appetite, normal. Normal urine. No treatment.

December 11th. Erythema is disappearing.

December 12th. Eruption has disappeared in the morning. Later in the day nausea, chill, headache, general malaise. Pains back of the head. On arrival I find patient with head drawn back, in high fever (104.93 F.); pulse, 140. Not somnolent. Posteriorly to the sterno-cleido-mastoid muscles large numbers of hard, swollen lymph nodules are felt between the deeper cervical muscles. No succulent infiltration of the tissue surrounding the lymph-nodes. Each one can be distinctly felt. The posterior half of the neck appears swollen. Great tenderness, explaining opisthotonos position of head. Throat is positively clean. Tonsils small. No redness. Trace of albumin in urine. No casts. Treatment: Antipyrin, four grains in watery solution, given six times in twenty-four hours per rectum. Much relief at night. Erythema barely visible in faintly bluish spots on extremities.

December 13th. Infiltration of cervical lymph nodes subsiding. No swelling of lymph nodes in groin, axilla, or other parts. Temperature, 101° F. No appetite. Trace of albumin. Tenderness of neck almost gone by evening.

December 14th. During the night, 3 a.m., violent nausea and vomiting, chill, pains all over body, but especially in joints. At 9.15 a.m., I find temperature 104.88 F., pulse 140, a new eruption over the face, injection of both conjunctivæ, marked œdema and redness of upper eyelids. Face, neck, and extremities covered with large and small blotches. Trunk shows but few smaller spots. Joints of wrists, knees, elbows, and ankles are tender and slightly swollen, but not reddened as in acute rheumatism. The left hip-joint is very tender. The infiltration of cervical lymph nodes has entirely disappeared, and the head can be moved in all directions. Trace of albumin. Some few casts. Anorexia. No headache. Treatment: Six grains of salicylic soda in watery solution, given every two hours per rectum. Temperature, 103° F., 5 p.m.

December 15th. Pains in joints much better. Temperature, 102° F.; pulse, 116. Erythema less marked. Has disappeared from conjunctivæ. Upper eyelids still swollen and red. A few isolated lymph nodes can be felt at back of neck. No tenderness. Pains now back of the knee-joints, and more marked along the muscles leading from the affected joints. Trace of albumin. Few casts. 9 p.m., temperature, 104.2° F.; pulse, 120.

December 16th. Joints entirely free. Muscles tender. Erythema disappearing. Still marked in face. Anorexia. Temperature 101° F., a.m. Heart normal. Very thirsty. Had a restless night. 9 p.m.: Erythema has completely disappeared. Pain only in tendons, back of both knee-joints. Temperature, 100.5° F.; pulse, 96. Some appetite. Trace of albumin.

Remarks. That the symptoms recorded here were due to the antitoxin alone is evident for the following reasons: (1) No local disturbance appeared at the points of injection, thereby excluding the possibility of an unclean syringe. (2) The erythema appeared exactly ten days after the injection of the antitoxin, exactly the time given in two cases of Scholz (*l. c.*), and the case of Lublinski (*l. c.*). (3) Swelling and pains in joints, and tenderness of muscles and tendons (the latter back of the knee-joints), were well marked in all four cases. (4) The affection persisted in all cases for four to seven days.

Our case differs from those of Scholz and Lublinski in so far that the patients of Scholz (his own children) presented no rise of temperature; the one of Lublinski showing temperature of 101° to 103.4° F., and but one rise to 104.5° F.; while the fever in our case was but slight during the first eruption (99.5° F.), but showed marked tendency to go above 104° F. during four successive days.

In our case we saw two distinct eruptions. On the disappearance of the first a sudden infiltration of the posterior cervical lymph nodes appeared, together with a marked chill and high fever. This phenomenon passing away, a new chill and rise of temperature initiated another eruption of the characteristic erythema, together with articular affection and muscular pains.

The difference between the four cases appears to allow an explanation, best seen by tabulation.

(1) Scholz: Boy, aged ten. 600 antitoxin units. Behring. Erythema, articular and muscular pain. No fever.

(2) Scholz: Girl, 600 antitoxin units. Behring. Erythema, articular and muscular pain. No fever.

(3) Lublinski: Girl, aged eight. 1,200 antitoxin units. 10 c.c. Erythema, articular pain. 101° to 104.5° F.

(4) Seibert: Girl, aged six and a half years. 20 c.c. Pasteur Institute. Two eruptions of erythema; lymph-node infiltration; two chills; temperature, 104.9° F.; joint and muscular affection.*

*Since the above was written I have found two more cases, by Mondal and Asch (*Berl. klin. Wochens.*, November 26 and December 17, 1894), two others by Cuyrine (*Deutsch. Med. Woch.*, November 29, 1894); and a fifth by Porteaux (*New York Medical Journal*, January 12, 1895); in all, nine cases.

In the first two cases but 10 c.c. of Behring's weakest serum was injected; hence erythema, articular and muscular affection, appeared without a rise of temperature.

In the third case the double quantity was used within twenty-four hours; hence these symptoms came on with fever, ranging from 101° to 104.5° F.

In our case 20 c.c. (from Pasteur Institute) were injected within twelve hours; hence the two eruptions, the lymph-node infiltration, the joint and muscular affection, and the high temperature. The first two cases recovered in four, the third in five, and the last in seven days.

Although we are not informed as to the relative strength of the antitoxin from the Pasteur Institute, it appears as though the 20 c.c. injected were much more powerful in their after-effects than the weakest serum of Behring (No. 1).

The albuminuria seen in our case I am inclined to attribute to renal stasis.

In the small number (fourteen) of other cases of diphtheria I have treated with antitoxin, no after-effects appeared. The wonderful similarity as to the time of their appearance, as well as to their location, shows that these after-effects are due to the antitoxin itself, and not to any difference in its production.—*Medical Record*.

Clinical Notes.

REPORT ON AMPUTATION OF NEUROMA, REMOVED BY DR. PETERS.*

BY A. J. HUNTER, B.A.,
TORONTO.

TWO small tumors were removed. The largest was in connection with a large nerve cord, as shown in the following diagram :



Before entering the tumor the cord expanded into two bulbous enlargements. In the tumor itself the fibres distributed themselves as indicated by the dotted lines, as was seen by a partial dissection of the portion included between *c d* and *a b* on the figure, and also by sections parallel to the line *a b* beyond it. Some of the funiculi passed beyond the limits of the tumor, and appeared as small nerve cords at *g*. On cutting into the bulbous enlargements in the fresh state much of their bulk seemed to be made up of a gelatinous-looking tissue, through which bundles of nerve fibres were seen running in the general direction of the cord.

Microscopical examination. Longitudinal sections at *h* treated with osmic acid showed the nerve fibres for the most part fairly normal. Beyond this part, in addition to normal fibres, numerous fibres showing regenerative processes were seen, viz., inside of old nerve fibres numerous smaller fibres were found, causing the swelling out of the old sheaths of Schwann much beyond their normal extent, in some cases breaking through the sheath and thus allowing the nerve fibres to become free.

*Read before the Toronto Pathological Society.

Cross-sections showed the funiculi in some parts normal, in other cases their structure altered by increased development of a loose connective tissue between the fibres, separating them more or less widely from each other. In this, perhaps, lies the explanation of the much smaller volume of the nerve cords issuing from the tumor, as compared with the cord entering it. The fibres of the funiculus first separate, and then lose themselves in the mass of connective tissue. In the bulbous enlargements this process could be very nicely traced, the breaking up of the funiculi and the number of fibres showing regenerative processes increasing as the large tumor mass was approached.

The large mass contains a certain quantity of muscular tissue, probably derived from the neighboring muscles, but is chiefly made up of fibrous tissue and nerve fibres running in various directions. Blood vessels were also present, and the nerve cords showed a large increase in the number of their nuclei, suggesting the appearance of smooth muscle fibre in some parts. The issuing nerve branches showed numerous fibres exhibiting regeneration changes. The small tumor had a similar structure to that of the large mass shown in the diagram.

CASE OF PRIMARY LARYNGEAL DIPHTHERIA TREATED BY ANTITOXIN, WITH POST-MORTEM REPORT.

BY W. B. THISTLE, M.D.,

Assistant Demonstrator of Anatomy, University of Toronto; Physician to Victoria Hospital for Sick Children; Clinical Lecturer on Diseases of Children in the Woman's Medical College.

G. F., æt. 5 years, admitted to Victoria Hospital on December 3rd, under the care of Dr. H. T. Machell, who kindly allowed me to use the antitoxin, and since then to make this report. The boy had been ill for two days previous to admission, and showing signs of some obstruction in the larynx. No membrane was discovered in throat or nose. Dyspnœa was extreme at the time of admission, and became shortly so urgent as to threaten life, and Dr. G. R. MacDonagh was called to intubate. Temperature on admission, $101\frac{1}{2}^{\circ}$; pulse, 125; respiration just before intubation, 65. Marked relief was given at once, but breathing still continued rapid. Râles were heard throughout the entire chest. Evening of 3rd, temperature, $102\frac{4}{8}^{\circ}$; pulse, 138; respiration, 48; knee jerk obtained. Urine was, unfortunately, not examined. Patient takes food well, and is fairly comfortable. A small area of dullness at right posterior base discovered, and fine crepitation heard over same area. Dec. 4th, temperature, 102° ; pulse, 126; respiration, 40; intellect clear. Transferred to infectious ward, although no sign of membrane had been discovered. 4 p.m., temperature, $104\frac{2}{8}^{\circ}$; pulse, 140; respiration, 42. Is quite rational. Injected 7 c.c. or 105 minims of antitoxin, obtained from Mr. J. J. Mackenzie, of the Provincial Board of Health. One hour after injection temperature had fallen to 103° , but shortly rose again, and at 12 p.m. was $105\frac{3}{8}^{\circ}$. Died at 4 a.m., Dec. 5th.

Autopsy. Thick membrane covering lower surface of vocal cords, and extending down to finer bronchioles, forming a thick cast of entire bronchial tree. A small area of consolidated lung at right posterior base. Microscopic examination discovered rod bacilli of the Klebs-Leoeffler form, and also immense numbers of micrococci and streptococci.

This is the third consecutive case of fatal croup occurring in this hospital in which post-mortem examination showed a similar condition in

larynx and bronchi, although no membrane could be seen above the larynx either during life or post-mortem. In none of them was the knee jerk absent. Unfortunately, owing to some mistake, the urine was not examined in this instance.

With reference to the antitoxin, it, of course, failed, and the case was undoubtedly diphtheria. It might have been given earlier, but it was thought that perhaps the consolidated patch might account for the continued elevation of temperature, and persistence of rapid respiration after intubation. When one comes to consider the condition present, it would be nothing short of miraculous if antitoxin had been successful in this instance. Even if injection of the fluid could instantly destroy every diphtheritic germ in the entire tract, there must still remain the necrotic mass which formed the membranous lining of the tubes. Antitoxin could have no effect upon this already dead tissue, or upon the organisms, other than the Klebs-Loeffler bacilli, with which, as the microscope showed, it teemed. In other terms, even though the antitoxin were the most perfect antidote to diphtheritic infection, there would still remain in a case like this a septi-bronchitis so extreme as to almost preclude the possibility of recovery. No matter how short the distance the membrane extends from the larynx, its presence as *dead tissue* abounding in organisms, septi in the ordinary sense, forms an element in the prognosis which must be considered.

LESIONS IN A CASE OF ACUTE MILIARY TUBERCULOSIS—
SPECIMEN OF TUBERCULOSIS OF LUNG AND LARYNX
—A CASE OF UNIVERSAL ATHEROMA OF AORTA,
WITH ANEURISM.*

BY J. T. FOTHERINGHAM, M.D.,
TORONTO.

LESIONS IN A CASE OF ACUTE MILIARY TUBERCULOSIS.

MRS. P——'S baby, æt. fourteen months, died in Victoria Hospital on Sunday morning, May 21st, 1893. Mother had been sent to Toronto General Hospital about four weeks before with pleurisy, perhaps tubercular in origin, and some signs of right apical consolidation. Mother's family history bad, as her mother and one sister had died of tuberculosis at about her age—thirty-five—and two brothers of a lingering illness, probably the same. Mother very much debilitated, but had been nursing child steadily up to time of going to Toronto General Hospital. Child had learned to walk, but had given up trying to walk, and was evidently feeble, though still well nourished. Constipation had been the chief trouble with it. When mother went to Toronto General Hospital, infant was sent to the Home, St. Mary street, for about four weeks, during which time it failed constantly, never cried, but was unable to digest any food. On Friday, May 19th, it was sent to Victoria Hospital, where it showed signs of meningeal trouble, chiefly basic, some slight spastic movement of arm and leg in *right* side, slow, irregular breathing (not Cheyne Stokes), marked by an occasional full sigh, a breathing *luxus*. Pupils about alike, but eyelids unequally opened, and eyeballs squinting. Temperature 101° F., running very high at the last. No crying. Food (wine whey, etc.) well taken. Sunday morning it suddenly grew worse, and died in an hour or so.

Post-mortem. Done six hours after by Dr. Clingan. Dr. J. M. MacCallum and myself also present. Small, emaciated body, large abdomen, wasting most marked in thorax and limbs. Anterior fontanelle very large. Abnormal appearances noted were :

(1) *Thorax.* No pleural thickening. Lungs dotted all through with miliary tubercles in first stage. No softening anywhere. Bronchial glands

*Read before the Toronto Pathological Society.

enlarged, and similarly studded with tubercles, but no caseation. Heart normal.

(2) *Abdomen.* Liver and spleen full of miliary tubercles ; no softening.

(3) *Cranial cavity.* Base of brain. Middle lobe dotted on under surface with a few tubercles. Beneath pia, behind optic commissure and out towards fissure of Sylvius, a thin film of whitish gelatinous deposit obscuring the deeper structures, the anterior perforated spaces, tuber cinereum, and corpora albicantia. There seemed to be minute tubercles in the line of the middle cerebral arteries.

Vertex of cranium. An interesting lesion was found at upper and inner angle of the right frontal bone, to right of and below anterior fontanelle. A very well-marked patch of caseous material, size of twenty-five-cent piece, but oval, had formed between dura and bone, the latter being eroded to the diploe, from the cancellous tissue of which the nutrient medium for the culture was evidently obtained. The culture was adherent to the dura mater, thickening it as much as $\frac{1}{16}$ inch or a line.

Query: How did the spastic movements come to be on the right side? Were they basal in origin, not cortical? The cortical lesion was too far forward for the motor area, besides being on the same side as the spasm.

SPECIMEN OF TUBERCULOSIS OF LUNG AND LARYNX.

I have the honor to present, for the consideration of the society, two specimens obtained at a post-mortem done by Dr. N. A. Powell on the body of a man who died in the General Hospital about a week ago of hæmorrhage of the lungs. I regret that there are no points of any special interest in them. His family history was negative as regards tuberculosis. He had lived a "hard" life, both as regards habits and occupation, having worked as laborer, again on a dredge, again as railway brakeman, and again as stoker on different lake steamers, each occupation being followed for some time. Had been a heavy drinker for years, and especially during the last two months.

His trouble dated from two and a half months ago, when he caught a severe cold from sitting between decks on the *Carmona* in the intervals of his work in the stoke-hole. From that time he dated his hoarseness.

The laryngeal trouble may be assumed to have been secondary to the apical lesion, and the specimen illustrates beautifully the spreading of the disease by continuity of tissue from the foci in the ventricles of the larynx. There are some small deposits, not yet caseated, in the mucosa of the pharynx, low down towards the œsophagus. Dysphagia was not experienced by the patient.

As to the lungs, the left had a small and well-cicatrizized cavity, the size of a pea, in the apex. The right lung, here shown, has a large, smooth-

walled cavity at the apex. Here the hæmorrhage occurred which killed him. He had had some considerable bleeding from it for two nights preceding, but was trying to conceal it. About two months ago he had slight oozing for two nights, which streaked the sputum with blood. There was very little disease in the lung, except at the apex.

Query : Are the anatomical appearances those of a recent and acute vomica, or of an old and slowly enlarging one ?

A CASE OF UNIVERSAL ATHEROMA OF AORTA, WITH ANEURISM.

N., æt. 64 ; admitted to the Toronto General Hospital, August 10th, 1891 ; of good family and bad habits, going on occasional outbursts of high eating and hard drinking. Had been much given to athletics when young, while living in Montreal. Claimed to have been first white man to beat Indians in two-mile snowshoe race.

Main clinical symptoms seen during stay in hospital : Much emaciation ; marked orthopnoea ; serious aortic regurgitation, causing vertigo and bad vision ; serious mitral regurgitation. Marked irregularity of pulse, with rapidity, rate over 100 ; reduced by digitalis to 70 per minute ; would drop at times to 50, always showing great irregularity. Marked hypertrophy of left ventricle ; pulsation plainly seen over large area of chest wall on both sides of sternum. Very marked "water-hammer" pulse, with monilicated radial arteries.

Digestive system. Gastric catarrh, much nausea in mornings, vomiting and retching, accompanied by coughing.

Respiratory system. Well-marked chronic bronchitis, with bronchorrhoea. Orthopnoea already mentioned.

Compensation was for a time fairly re-established by digitalis, alcohol, and rest, till one morning at ten o'clock, on going to the bathroom, he fell, and died instantly from cardiac failure.

Post-mortem examination made six hours later : The most marked pathological conditions were found in the thorax. The others may be mentioned first.

Kidneys. Both enlarged, left weighing $10\frac{1}{2}$ ozs. instead of $4\frac{1}{2}$ to 6 ozs. Capsule rather adherent, substance very dense from fibrosis.

Spleen. Full of minute calcareous nodules, felt both externally and on cut surface as if it had been sprinkled with sand. In the absence of a microscopical examination of it, I may hazard the suggestion that these were calcareous degenerations of the arterioles, judging by the extent of this form of degeneration elsewhere in the body.

Arteries. Largely degenerated. Aorta especially, from heart to within four inches of bifurcation, a sort of fiddle-box, ringing when tapped as it

lay in the mediastinum, which it distended, capable of containing most of the blood ordinarily found in the body. Really a fusiform aneurism with rigid walls (they are now much softened by being kept in alcohol), except for one spot on anterior surface of third part of aorta, where a bulging aneurism had begun to form, about two inches or two and a half inches in size.

Thorax—Lungs. Extremely adherent and almost universally, especially to the whole diaphragm ; much the same condition before, behind, and at apex. Left lung could not be removed, and right lung left a large portion of its base adhering to the diaphragm. Pericardium surrounded by unusually large amount of loose areolar tissue, particularly in anterior mediastinum. Cavity almost entirely obliterated by dense fibrous adhesions to epicardium ; no fluid in cavity. Heart motion had evidently mainly through looseness of the extra-pericardial areolar tissue referred to.

Heart. Right ventricle greatly dilated and thinned. Left enormously hypertrophied. Valves much diseased.

Progress of Medicine.

MEDICINE

IN CHARGE OF

J. E. GRAHAM, M.D., M.R.C.P. Lond.,

Professor of Medicine and Clinical Medicine, University of Toronto; Physician to the
Toronto General Hospital, and St. Michael's Hospital;

AND

W. P. CAVEN, M.B., Tor.

Lecturer in Clinical Medicine in the University of Toronto; Physician to
Home for Incurables.

THYROID FEEDING IN DISEASES OF THE SKIN.

From the few cases thus far published it would be foolish to draw conclusions. Personally, I am not inclined to experiment further with this line of treatment. To cure ten cases of psoriasis out of twenty-six is no great thing to boast over, specially in hospital practice, as were most of the cases cured. When you take into consideration that the drug, in whatever way that you exhibit it, is liable to produce sudden distressing and grave symptoms, *that* at once bars it from the use in out-patient, ambulant practice. We surely have many other safer methods of treatment in hospitals that yield more brilliant results than this method, so efficacious in myxœdema and cretinism. In these diseases it is worth while to run a risk as to life in the hope of removing symptoms that make life hardly worth living. In dermatoses, on the contrary, life is, generally speaking, little endangered, and we are not justified in resorting to too heroic measures.—Dr. George T. Jackson, in the *Journal of Cutaneous and Genito-Urinary Diseases*.

A CASE OF WARTS.

The patient was a woman with an extraordinary development of warts covering the palmar and dorsal aspects of both hands. These had existed for five years. They were gradually becoming flatter. The patient also had a few warts on the face.

Dr. Klotz inquired what results had been obtained by the members present from treatment, as he had found the remedies usually recommended quite ineffective, particularly salicylic acid.

Dr. Jackson thought the case served to illustrate the infectious nature of warts. Dr. Lustgarten said that the large number of the warts and the manner of spreading suggested auto-inoculation. He recommended a 30 per cent. alcoholic solution of salicylic acid ; so did Dr. Sherwell, Dr. Jackson salicylic acid plaster.

Drs. Piffard, Keyes, and Cutler reported favorable results from the external and internal use of the tincture of thuja. Dr. Piffard employs a strong tincture, beginning with five drops and running up to a dram, three times a day. In some cases the drug proved very efficacious, while in others it had failed absolutely ; it had been known to give rise to dermatitis and phlebitis. Dr. Keyes had given the tincture of thuja in tablespoonful doses ; in some cases of papillomata it had undoubtedly effected a cure. Dr. Cutler reported a case in which probably over one thousand warts had been present on different parts of the body. Under the use of thuja both externally and internally, they had almost entirely disappeared.

Dr. Allen called attention to the fact that this patient, as she informed him, had taken a great deal of arsenic, apparently without much effect.—Presented by Dr. Piffard for Dr. A. R. Robinson, at a recent meeting of the New York Dermatological Society.

ACAROPHOBES.

Dr. Thibierge, in a recent clinical lecture, has called attention again to a series of patients—much more numerous than is usually believed—who imagine themselves to be infected with such parasites as the acarus, pediculi, etc., when no such trouble exists. These are almost always neuropaths, neurosthénics, or hysterics. Some have already had the itch, and believe that they have not been cured or that the affection has recurred, while others believe themselves the victims, when they have never had the disease. Those affected are usually subjects of rebellious pruriginous dermatoses, and at times of well-defined dermatoses, such as eczema, chronic urticaria, and occasionally purely nervous affections of the type of pruritus senilis. It is often very difficult to convince these patients that they are not suffering from itch, and they will not listen to the physician. One is occasionally obliged, in order to demonstrate their error, to put them through a complete course of scabies, which fails to give relief. Those having the cocaine habit are frequently acarophobes ; they feel, indeed, peculiar sensations in the skin which lead them to bore into

their skin with a needle or point of a knife in order to extract the animalcules.

[These hallucinations concerning the skin are relatively frequent in neuropaths, and, for my part, I have observed several cases. One of the most complete examples I have encountered was furnished me by a woman of sixty, who followed me up for over six months, at my polyclinic of La Rochefoucauld, entreating me to rid her of the little beasts she had in the skin, and which she said were gnawing at her. The hallucinations went so far that she claimed she could see them at times come out upon the surface. It is useless to add that she was never able to show one of these animalcules. The skin was entirely free, and did not even show any signs of scratching. I was unable to convince this patient of her error, and was never able to free her from the sensations, either by hydrotherapy, sedative lotions, or by antipruritic ointments. These patients are evidently candidates for the lunatic asylum, if not already demented.]—L. Brocq, in *Journal of Cutaneous and Genito-Urinary Diseases*.

ACUTE YELLOW ATROPHY OF THE LIVER IN A CHILD.

Merkel (*Münchener medicinische Wochenschrift*, January, 1894) records an unusual case of this disease occurring in a child of six years. The first symptoms noticed were malaise and loss of appetite, followed by jaundice, the temperature then being normal, but the pulse slightly increased in frequency. The tongue was furred, and the urine contained bile, but no albumin. The lower border of the liver could be felt two fingers' breadth below the costal margin. Eight days later the liver had considerably decreased in size, and could not be felt by palpation. The spleen, however, was enlarged. The jaundice had become intensified, and convulsions now appeared. The temperature still remained normal, but the pulse had increased to 116. Death ensued seventeen days after onset. At the post-mortem the lungs were found cedematous, while subserous hæmorrhages were numerous; the gall-bladder contained very little bile. The liver was very small, yellowish-brown in color, showing a number of red islets; there was gray degeneration of the hepatic cells, with round-cell infiltration in places. The kidneys showed swelling and gray degeneration of the renal epithelium, together with small hæmorrhages into the substance. Commencing degeneration of the cardiac muscle fibres was also noted. The cause of the disease, as is usual in such cases, could not be determined.—*American Journal of the Medical Sciences*.

THERAPEUTICS

IN CHARGE OF

GRAHAM CHAMBERS, B.A., M.B. Tor.,

Professor of Analytical Chemistry and Toxicology, Ontario College of Pharmacy; Lecturer
in Organic Chemistry and Toxicology, Woman's Medical College;

AND

WILLIAM LEHMANN, M.B. Tor.,

Physician to the Home for Incurables and House of Providence.

NOCTURNAL ENURESIS.

MacAlister (*Practitioner*, vol. lii., No. 5, p. 331) recommends the administration of atropine to the point of tolerance, in conjunction with medicinal doses of strychnine. Thus, he begins with gr. $\frac{1}{100}$ of atropine at night, and gradually increases the dose every third night to gr. $\frac{1}{10}$ and more. When conditions requiring surgical interference are present, these receive attention. It is further directed that no drink be taken after 6 p.m. that the medicine be taken at 9 p.m., and that, after emptying the bladder, the child should go to bed at 10, and that it should be awakened to urinate at 12, and again at 6 a.m.—*Medical News*.

ENLARGED GLANDS.

R.—Iodoformi	} aa ʒj.
Balsam Peruvianæ		
Collodii.....			fʒj.—M.

S.—To be painted over the swellings every night.—*Medical Press and Circular*.

TREATMENT OF CHLOROSIS.

Professor Jaccoud maintains that patients suffering from chlorosis do not want so much a larger number of red blood corpuscles as an increased amount of hæmoglobin—that is, iron and oxygen. From the very first he gives inhalations of oxygen gas, at least thirty litres (6 to 7 gallons) daily, and amongst the iron preparations those made with an organic acid, such as the tartarate, citrate, and the new protoxalate. These preparations are given in six-grain doses daily. The protoxalate is administered in powder in the same dose divided into two parts, one given in the middle of each important meal of the day.—*Medical Chronicle*.

TURPENTINE IN INCONTINENCE OF URINE.

The unpleasant smell emitted by persons suffering from incontinence of urine can be conveniently covered, according to Dr. Emminghaus, by means of ten-drop doses of turpentine, administered in milk or water, three times a day. This converts the smell of stale urine into an odor resembling that of violets, as is well known to persons who have taken turpentine. The remedy is perfectly harmless in most cases, and has been given by Professor Emminghaus for many weeks at a time without any inconvenience. It is, however, contraindicated in ulcer of the stomach, gastric catarrh, and nephritis, and also in some persons in whom turpentine tends to upset the digestive functions.—*The Lancet*, October 27, 1894.

IODOFORM IN PULMONARY TUBERCULOSIS.

A. Toxwell (Birmingham *Medical Review*), after an experience of eight years in the use of iodoform in phthisis, considers it the most satisfactory of all the antiseptic drugs which have been used in pulmonary tuberculosis. The medicine should be given in pill form, two grains three times a day, or one grain six times a day. After a few days the daily dose should be gradually increased until it amounts to thirty grains.

HYDROGEN PEROXIDE AS A HÆMOSTATIC.

A strong solution of hydrogen peroxide acts as an excellent hæmostatic when the vessels cut are not large. It probably acts both as an astringent and by oxidizing the blood, which increases its coagulability.

CONTINUOUS INHALATIONS OF OIL OF PEPPERMINT IN THE TREATMENT OF PULMONARY TUBERCULOSIS.

Carasso (*Medical Magazine*) contributes a lengthy paper on this subject, and gives the following directions as to its method of use: A pad, made by folding a linen handkerchief, is placed below the nares, and is kept in position by a tape passing around the head. The pad is charged with five or six drops of the oil four or five times a day. Every ten or fifteen minutes the patient is instructed to take a deep inspiration, breathing through the nose with closed mouth, and then hold the breath as long as possible, so as to bring the medicine in the inhaled air into the alveoli, bronchioles, and vomicæ. The pad is left in position during the night, but, in addition, it is well to pour fifteen or twenty drops of the oil on the pillow, as the pad may be displaced. The patient, at the same time, takes creasote, and is directed to eat and drink freely of nutritious food. Milk should form an important article of diet.

OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

Professor of Obstetrics in the University of Toronto; Obstetrician to
the Toronto General Hospital.

ASSISTED BY

H. CRAWFORD SCADDING, M.D.,

Physician to Victoria Hospital for Sick Children.

RUPTURE OF UTERUS AND VAGINA.

Dohrn (*Centralbl. f. Gynak.*, No. 11, 1894) relates how a woman, aged 41, in her eleventh labor, was driven in a sledge over eighteen miles to Königsberg last December. The presentation was transverse, and the uterus had been ruptured during an attempt at turning. The child was extracted, but not the placenta. She arrived in an exhausted condition, anæmic, and with distended abdomen. The funis hung out of the vulva, whence blood trickled rather freely. The vulva was at once cleansed by washing with a 5 per cent. solution of carbolic acid. A 1 in 1,000 solution of sublimate was used to swab the vagina, which was afterwards irrigated with boracic acid lotion. Then, on exploration, a large rent was found in the cervix, extending into the left vaginal fornix. In the rent were coils of intestine and the placenta, which was extracted. After reduction of the bowel, over six yards of iodoform gauze, three inches wide, were passed into the vagina. A binder was firmly fastened round the abdomen. The patient at once began to recover. On the sixth day the tampon was removed. A little lochial secretion had trickled through it, but it was free from smell. On the fourth week the patient had an attack of pneumonia, from which she recovered. The uterus became fixed and dextroverted. According to Merz, seven out of fifteen cases of ruptured uterus treated by the tampon recovered.—*British Medical Journal*.

INTRAPERITONEAL HÆMATOCELE.

Mr. John W. Taylor read a paper entitled "Intraperitoneal Hæmatocele, forming a Definite Tumor: The Relation of this to Unruptured Tubal Pregnancy," ("Tubal Abortion,") before the British Gynæcological

Society. He had been struck by the frequency with which, as his experience of ectopic gestation increased, he had met with cases of unruptured tubal gestation; even when much hæmorrhage had occurred, it was often found that the pregnancy itself was still within the tube, the blood having "dripped" out from the open fimbriated end. Some surgeons had doubted even the possibility of an intraperitoneal hæmatocele forming a definite tumor, and had supposed that all such local hæmorrhages must be extraperitoneal, and between the layers of the broad ligament. Such teaching was not altogether true, in proof of which he related a case where, after operation on a parovarian cyst, there was secondary hæmorrhage from the stump. Some peritonitis followed, and the blood became localized, its upper limit being defined by an abrupt line stretching across the abdomen. The hæmatocele was tapped *per vaginam*; later the remainder of the clot decomposed, and he evacuated it by free incision from below. The finger was passed into the abdomen through Douglas' pouch, and he satisfied himself that the hæmatocele was strictly intraperitoneal. Analogous cases sometimes resulted from the rupture of a tubal pregnancy, with a moderate degree of hæmorrhage; but this was exceptional. The most common cause of a defined hæmatocele was the slower hæmorrhage or blood drip, which took place from an open Fallopian tube when the pregnancy or mole lay within it. Such hæmatocèles were found at operation under various conditions: (a) A mass of coagulum without definite form or consistence, easily scooped or washed out. (b) A definite and consistent clot adherent to the peritoneum, the surface of which it leaves rough on removal. (c) By adhesions to neighboring parts a tubo-ovarian blood cyst was formed, distinguished anatomically from the true tubo-ovarian cyst due to pyosalpinx by the fact that in the former a new formation of tissue helped to make the cyst and enclose the blood, whereas in the latter the walls were formed entirely by distended tube and adhesions. (d) Lastly, there was a condition hitherto, so far as he knew, unrecognized, in which a complete cyst wall was formed by organization of the blood clot. Within the neck of this globose pitcher lay the fimbriated end of the Fallopian tube, which could be lightly drawn out from its enclosing sheath, showing its fimbriated end uninjured. Illustrative cases of these conditions were related. Referring to Mr. Lawson Tait's view, that tubal gestation before gestation was never diagnosed, except by mere accident, because it produced no symptoms, Mr. Taylor said that he and others could point to specimens of unruptured gestation correctly diagnosed before operation. But as regarded the diagnosis between ruptured tubal gestation and so-called tubal abortion, the only distinguishing feature that he could find was that in the latter the period of amenorrhœa preceding the irregular hæmorrhage was commonly wanting. On the subject on

nomenclature, he thought that the term "tubal abortion" had, in the hands of Mr. Bland Sutton, done much to spread knowledge and to increase interest. But he could not find in his own or any other cases any evidence of extrusion of the mole; and so thought that the term was neither happy nor exact. He had drawn up a table, showing what he believed to be the various possible consequences of tubal pregnancy.

Tubal pregnancy may cause	(1) Hæmorrhage from the abdominal ostium with formation of defined intraperitoneal hæmatocele.....	(1) By simple clotting. (2) Clotting with septal adhesions. (3) Clotting with peripheral adhesions. (4) Encapsulation.
	(2) Rupture of tube into	(1) Abdomen (2) Broad ligament
	(3) Closure of tube and formation of tumor of indefinite duration (possible develop- ment in tube?).	(1) With diffuse hæmorrhage into the abdomen. (2) With formation of defined intra- peritoneal hæmatocele (rarely). (3) With escape of fœtus, forming so- called abdominal pregnancy. (1) With formation of extraperitoneal or broad ligament hæmatocele. (2) With development of so-called broad ligament pregnancy.

Dr. Cullingworth thought that as the term tubal abortion had acquired a definite meaning, it would be unwise hurriedly to discard it. He agreed with the author that hæmatocele and tubal abortion were diagnosable; the proof was that they were continually being diagnosed and verified by operation. He had looked up his notes of ectopic gestation and hæmatoceles. He found that of ten cases of the latter on which he had operated eight were due to pouring out of blood from an unruptured tube; one only was due to rupture of a tubal gestation, and one was due to a ruptured hæmorrhagic broad ligament cyst of the opposite side. Of cases of ruptured early tubal gestation he had had six. In four the blood was diffused, in one the rupture was into the broad ligament, with formation of hæmatoma (extraperitoneal hæmatocele), and one resulted in the intraperitoneal hæmatocele above mentioned. So that his experience of the relative frequency of the different causes of intraperitoneal hæmatocele entirely coincided with Mr. Taylor's. He had had one case illustrating Mr. Taylor's fourth group of encapsulation; and the explanation in the paper had put the matter in a clearer light. In the last volume of the St. Thomas' Hospital Reports there was a colored drawing of such a case.—*British Medical Journal*.

SURGERY

IN CHARGE OF

L. M. SWEETNAM, M.D. Tor.,

Lecturer on Therapeutics in the Woman's Medical College; Surgeon to the Outdoor Clinic, Toronto General Hospital; Surgeon to St. Michael's Hospital;

AND

A. PRIMROSE, M.B., C.M. Edin.,

Surgeon to the Hospital for Sick Children. etc.

CEREBRAL TUMORS.

Messrs. Beevor and Balance report a case of subcortical cerebral tumor treated by operation in the *British Medical Journal* of Jan. 5th. The salient points of the case were summed up as follows :

(1) The gradual onset of the paralysis, involving successively the right ankle, the knee, and hip, and then extending, after the lapse of seven months, to the joints of the right hand, and then to the whole of the upper extremity. Finally speech became affected.

(2) The classical symptoms of intracranial pressure were present—headache, vomiting, and optic neuritis.

(3) The mental condition greatly deteriorated.

(4) There was some loss of sensation, affecting the right limbs chiefly, while the face entirely escaped.

(5) There was no family history of tubercle, and no personal history of tubercle or syphilis.

(6) Under anti-syphilitic remedies, taken for over six weeks, the patient's condition not only did not improve, but grew worse.

The presence of a tumor in the left cerebral hemisphere was determined, and by a consideration of the type signs of involvement of (a) the cortex, (b) the internal capsule, and (c) the centrum ovale, the authors came to the conclusion that the tumor was subcortical.

The patient was a married woman, æt. 39.

The following points may be mentioned with regard to the technique of the operation in this case : The *flap* adopted was the large U-shaped flap of Horsley, and included the periosteum. This flap was planned to expose a large area of the skull, e.g., the coronal and sagittal sutures were exposed, about one inch of the posterior part of the left frontal bone, and

practically the whole of the parietal bone, with the exception of the anterior inferior angle, and the part immediately adjacent to the lambdoid suture. The portion of bone to be removed was then mapped out with a large saw. It was in shape a parallelogram, whose anterior and posterior borders, running parallel with each other, were planned also to run parallel with the sutures of Rolando. The anterior border encroached a little on the frontal bone at its lower end. The upper border of the parallelogram corresponded with the sagittal suture, and extended along it from the pterion for fully $3\frac{1}{2}$ inches. The lower border was parallel with the upper, and $2\frac{1}{2}$ inches below it. The portion of bone thus removed would include the parietal eminence, and would allow of the free exposure of the upper part of the motor cortex, especially of the toe and ankle centres, at the upper extremity of the ascending parietal convolution, which it was desired to thoroughly examine.

The removal of the bone thus mapped out was accomplished by the aid of the same large saw, by means of which it was divided up into small quadrangular pieces by vertical and horizontal cuts. Those pieces were then easily raised from the dura by an elevator. The use of cutting forceps facilitated their removal. Along the upper boundary, part of the bone was disarticulated at the sagittal suture. In this way the bone was removed, and the middle meningeal artery lay upon the dura without being wounded. The dura bulged considerably.

The authors considered it a clearly desirable to perform *the operation in two stages*, the edges of the scalp wound were brought together, and antiseptic dressing applied.

Six days after the first operation the second operation was performed. The scalp wound was easily separated with the handle of the knife, and thrown down without bleeding. A little clot, which was lying on the dura, was taken away. As large a square dural flap as possible was cut, and folded down over the scalp flap. On exploring the ascending parietal convolution with the finger, the cortex here, being greatly thinned, was broken through, and the tumor, of a whitish-gray color, was seen. An attempt was made with the finger and the handle of a sterilized silver spoon to shell it out, but it was found to be continuous with and infiltrating the surrounding cortex, and also the substance of the hemisphere, about an inch below the surface, and towards the front and middle line. The consistence of the tumor was semi-gelatinous, softer than the normal brain substance, and it was found easier to remove it with a silver spoon than in any other way. A considerable hæmorrhage occurred at the time, and as it was not well controlled by filling the cavity in the brain by cotton wool a series of fine silk threads were passed through the cortex for a depth of three-quarters of an inch all round the affected area, except for

about an inch at the median line, and tied so that all vessels within the operation area were controlled. The area was about two and a quarter inches in diameter. A free incision was then made through the cortex all round, just within the line of suture, and all the included part, brain and tumor, was taken away by means of the spoon. The tumor extended to median surface of the hemisphere, and so a part of the marginal convolution and quadrate lobe was removed, the falx being clearly exposed. In this way as much as the tumor as was visible was removed; but as the line of junction of healthy and diseased tissue was so indeterminate, it is not possible to say that the whole tumor was excised; it is, indeed, probable that it was not.

When all bleeding had ceased, the dural flap was stitched carefully in position with fine silk. The scalp flap was brought into position by horsehair sutures.

The antiseptic employed during the operation was mercuric perchloride (1:2000). The brain wound was constantly irrigated with this solution, so as to keep it clear of blood, by syringing a wet cotton-wool mop over it. No marine sponges were used, and the operation area was kept free from blood, not by mopping or touching the brain, but by the stream of fluid.

Dr. Colman made a microscopical examination of the tumor, and reported the growth to be a sarcoma, with round and spindle cells.

The patient recovered from the operation. On August 29th (forty-three days after operation) the condition of the patient was recorded as follows: Her mental condition was very much improved, and, from being morose and dull, she became lively, and amused the other patients. She had no paralysis of the face, and could now carry the right hand to the chin, but could not move the fingers or thumb; she could walk with a little assistance; she had good movement at the hip and knee, and some movement at the ankle, but no movement at the toes. With regard to sensation, she could appreciate light touches everywhere but over the right upper limb, and localization was still faulty. Speech was perfectly restored.

On November 20th the condition of the patient was carefully recorded and narrated in detail by the authors. The patient was restored to her normal mental condition; speech was perfect; there was no headache; movements of the face normal. With regard to sensation, there was pain in the right shoulder, especially when moved. No anaesthesia anywhere, and she localized correctly. No loss of muscular sense. The movements of the arm and leg were restored to a remarkable extent; in fact, the various movements were carried out in normal direction at all the joints save the thumb and the toes. There was no movement possible of the toes, and the thumb could not be extended, and the movements at the shoul-

der were limited. Action of the movements thus accomplished were weak, e.g., flexion of the knee.

The case thus reported by Messrs. Beevor and Balance, of which the above is a brief abstract of their article as published, illustrates many points in the present position of brain surgery. The possibility of making an accurate diagnosis as to the localization of a tumor is strikingly indicated. (Unfortunately, lack of space prevents us giving the details of their argument in arriving at their diagnosis.) The authors are to be congratulated on their skill in this regard, also on the success of the operation, the details of which are worthy of careful study. The authors point out a remarkable feature in this case, namely, that, though so large an area of cortex had been removed, the patient had recovered sensation completely, and, with the exception of the toes, ankle, and shoulder, she had recovered almost completely as regards motion, but with diminished strength as compared with the other side.

The method of checking hæmorrhage from the brain substance after removal of the tumor is worthy of notice.

A.P.

FINDING THE UPPER END OF A DIVIDED TENDON.

Félizet (*Bulletin et Mémoires de la Société de Chirurgie*, 1893, p. 610), in cases in which the tendons are divided, whether at the wrist or hand, advises that the two adjoining fingers be fully extended. This will bring the upper end of the divided tendon into view, and thus enable it to be seized. The affected finger is then flexed, and thus the lower end of the divided tendon is brought up and the two ends are sutured with catgut. In order to prevent too much strain on the catgut sutures, the upper end of the divided tendon, a full centimetre above the point of division, is sewed fast with catgut to the adjoining healthy tendon. In treating the case afterwards the unaffected fingers are kept in a state of extension, while the affected finger is kept in a state of flexion. This position is to be maintained by means of a plaster dressing.—*Atlanta Medical and Surgical Journal*.

PÆDIATRICS AND ORTHOPÆDICS

IN CHARGE OF

W. B. THISTLE, M.D., L.R.C.P. Lond.,

AND

B. E. McKENZIE, B.A., M.D.,

Lecturer on Orthopædics and on Surgical Anatomy in the Woman's Medical College, and
Surgeon to the Victoria Hospital for Sick Children, Toronto.

ACUTE INFANTILE ARTHRITIS IN THE HIP.

Under this title Dr. Augustus Thorndike reports a case and discusses an affection which manifests itself in the joints of infants, and is believed to be due to an acute infection of pyogenic micro-organisms. The infecting matter may enter through any damaged surface of skin or mucous membrane, or any subcutaneous phlegmon. Predisposing causes are traumatism, the infectious diseases. The rôle of these is but imperfectly understood, though they probably act by making easy the entrance of the pyogenic germs, or by reducing the patient's capacity for eliminating or destroying them. It is possible that in some cases the specific germ may be the acting pyogenic factor.

The treatment is summed up under two heads: (1) That directed against the general septicæmia; (2) local treatment, consisting of free incisions, drainage, etc. After operation a splint is to be employed which will secure complete rest for the part. At the hip-joint it is not uncommon to have a dislocation resulting from the destructive course of the disease; but it is not necessary to have this remain. In the case here reported, five months' after the primary operation made to secure drainage, the head of femur was found on the dorsum ilii, and, an opening being made into the joint in the line of the former incision, an osteitic outgrowth at the lower part of the neck was found, preventing attempt at replacement; on the removal of which, and after scraping out the acetabulum to receive the femoral head, adjustment was effected. Six months after operation the child limped but little, no actual shortening, flexion through an arc of 25° , and other motions only slightly limited.

The affection is regarded as an uncommon one, and to-day is looked upon as representing a very acute infectious inflammation of the end of

one of the long bones, with rapid suppuration of the joint. It occurs generally in infants, and may be mono- or poly-articular.

Townsend, in 1890, collected all the cases which he could find recorded, and the number reached only seventy-one.—*British Medical and Surgical Journal*, Nov. 1st and 8th, 1894.

FORMULA FOR BRÔMOFORM.

R.—Bromoform.....	gr. xvi.
Alcohol.....	gr. vii.
Glycerine	3ss.
Tinct. Cardamon.....	gr. vii.

M.

—W. Lyon, in *Journ. d. Med.*, Paris, 1894, vi., 418.

THE ANTITOXIN TREATMENT: SHARP CRITICISM OF PROFESSOR
BEHRING.

The announcement that Dr. Hanseemann, an assistant of Virchow, would speak on the antitoxin serum brought more members than usual to last week's meeting of the Berliner Medizinische Gesellschaft. The speech was a sharp attack on Behring and the treatment associated with his name. It was followed with the greatest interest, and greeted with loud applause. Owing to the lateness of the hour, the discussion had to be postponed until the next meeting.

Hanseemann began by showing that Bretonneau's diphtheria is not caused by the Loeffler bacillus; that the bacillus does not even always accompany it; and that there are cases of Bretonneau's diphtheria with, and cases without, the Loeffler bacillus. That, on the other hand, Loeffler's bacillus is found constantly in rhinitis fibrinosa without producing diphtheria; that it is even sometimes found in normal mucous membrane; that under favorable circumstances the Loeffler bacilli multiply, without, however, exercising a decisive influence on the course of the disease. He said that in the case of animals an injection of a Loeffler bacillus culture causes, not diphtheria, but a disease *sui generis*, the Loeffler bacillus disease; that epidemic diphtheria had never been observed in animals; that guinea-pigs, in contact with diphtheria patients, had never taken diphtheria; but that a case is known where a cat, with which a child suffering from diphtheria had played, had developed all diphtheria symptoms, without, however, any Loeffler bacilli being discoverable.

He proceeded to the three qualities claimed for the antitoxin—namely, its therapeutic action, its harmlessness, and its immunizing power. He said that the present statistics give an erroneous impression (as already shown

by Gottstein in his recently published pamphlet), as many children suffering from lighter forms of throat complaints are now sent to the hospitals to be treated with serum, thus swelling the proportion of cured cases, which would, he said, otherwise not be higher than the usual average. He said that the serum injections could by no means be considered harmless, as affections of the kidneys had frequently followed—in one case more severe in type than had ever yet been observed after diphtheria. He said that it was clear, from Behring's new directions to increase the immunizing dose from 60 to 150 unities, that no results have yet been achieved, as far as immunizing goes.

CONGENITAL RICKETS.

Townsend, of Boston (*Archives of Pediatrics*, October, 1894), reports a case of rickets in which the rickety changes occurred *in utero*. The child's parents were young, well formed, and healthy, as were the other children in the family. There was no history of syphilis. During the time the mother was pregnant the family suffered much from poverty, the father being out of employment. The mother during her pregnancy had, on this account, much mental distress, besides being insufficiently nourished. The birth occurred one month before the time. The child weighed seven pounds, and was fourteen inches in length. The head was large, measuring $13\frac{1}{4}$ inches in circumference, square in front, and much flattened behind. Ossification in the skull bones was very deficient. There was much flattening in of the chest laterally. Circumference, $11\frac{1}{4}$ inches. Marked heading of the ribs giving rise to the characteristic "rosary." The abdomen was very large. On palpation, the liver could be felt beneath margins of ribs, apparently not at all enlarged.

The extremities showed marked signs of rickets by (1) enlargement of appendages, (2) curvature of the long bones, and (3) numerous fractures. Complete fractures existed at birth of both tibiæ of the left humerus, and of both bones of the forearm on the right side. Both epiphyseal enlargements and curvatures were marked in degree. The child was fed artificially, but died on the ninth day. No autopsy could be obtained.

PATHOLOGY

IN CHARGE OF

JOHN CAVEN, B.A., M.D., L.R.C.P. Lond.,

Professor of Pathology, University of Toronto and Ontario Veterinary College; Pathologist
to Toronto General Hospital and Home for Incurables.

ASSISTED BY

JOHN A. AMYOT, M.B. Tor.,

Demonstrator of Pathology, University of Toronto; Assistant Surgeon to St. Michael's
Hospital; Physician to House of Providence.

CHOLERA: A FATAL CASE FROM LABORATORY INFECTION.

It will be remembered that the experiments of Von Pettenkofer relative to the etiology of cholera, in the course of which he swallowed a considerable quantity of a bouillon culture of the specific bacilli, with the effect of inducing only a moderate degree of gastro-enteritis, led him to the conclusion that the germs alone were incapable of producing true Asiatic cholera (cf. *American Journal of the Medical Sciences*, March, 1893, p. 355). This conclusion was at the time disputed by the Berlin school of bacteriologists, by whom it was suggested that Von Pettenkofer had in reality suffered from a mild attack of cholera, and that, in any event, one case of positive infection would outweigh many negative experiments. The positive, unquestionable proof has at last come to us in the case of Dr. Oergel, assistant at the Hygienic Institute in Hamburg, who died recently from cholera acquired by direct infection while experimenting with pure cultures of the cholera bacilli. Details of the case are reported by Reincke in the *Deutsche medicinische Wochenschrift*, 1894, No. 41, p. 795.

The exact manner in which the infection occurred is not definitely known. Oergel was known to have on several occasions met with accidents in handling the cholera cultures with which he was working, and on one occasion he inadvertently sucked up through a pipette some of the peritoneal contents of a guinea-pig which had previously been inoculated with a virulent culture. Immediately after this he began to have diarrhœa, which proved intractable, and was followed in two or three days by a typical asphyctic stage of medium intensity, but with severe and prolonged muscular cramps. Vomiting and diarrhœa continued despite all efforts to stop them, and infusion soon became necessary. His strength gradually failed, a comatose condition supervened, with signs of a lung complication

on the seventh day, and on the eighth day he died. Throughout the entire course of the disease cholera bacilli were abundant in the stools, their presence and numbers being apparently uninfluenced by treatment. The diagnosis of cholera was substantiated by the result of the autopsy.

This case should serve to forcibly impress upon all those making use of cultures of the cholera bacillus the necessity of the greatest caution. It is indisputable proof of the etiological relationship of that germ to Asiatic cholera.—*American Journal of the Medical Sciences*.

Dr. E. Klein concludes from observations on the bacilli of anthrax, diphtheria, and tubercle, that these species are not such typical bacilli as they are usually represented to be. For though under many conditions their morphological characters are those of typical bacilli, yet under others they revert to, or assume, forms indicating their relationship to *Saccharomyces* or a still higher mycelial fungus. In the case of anthrax, the typical bacilli may be represented by oval and spherical bodies, some of which may contain vacuoles, and under other conditions (early stages of growth on plates composed of beef bouillon gelatin 10 per cent., pepton 1 per cent., salt 1 per cent.) the colonies are composed of large spindle-shaped, spherical, or oval elements, in which vacuolation is frequent. Similar appearances are to be observed in colonies of the thrush fungus. From this it is inferred that while *B. anthracis* is a typical bacillus as a pathogenic microbe, yet in its early stages of growth on gelatin it may assume characters having much resemblance to *Saccharomyces mycoderma* or *Oidium*, and thus return temporarily to an atavistic stage in its evolutionary history. With regard to *B. diphtheriæ*, the author points out that the club-shaped expansions of one or both ends are not to be regarded as due to involution, for both under natural and artificial conditions where there is active growth these expansions will be found, and have, moreover, a striking resemblance to the ends of growing hyphæ. Their existence, therefore, is only to be explained by their representing a relationship to a mycelial fungus. In the case of the tubercle bacilli, preparations not infrequently show threads or filaments composed of unequal elements, some of them being conspicuous for knob-shaped expansions, similar to those of diphtheria. Such appearances occur not only in sputum, but in artificial cultivations, e.g., glycerin agar, after some weeks incubation at 37°. All these preparations behave in the same way as *B. tuberculosis* when treated with appropriate staining reagents; and that they are not involution forms is evident, as the unbranched nature of the filaments and the existence of lateral bulgings prove that they are in an active condition of growth.—From *Microscopical Bulletin*, October, 1894.

HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

WILLIAM OLDRIGHT, M.A., M.D. Tor.,

Professor of Hygiene in the University of Toronto; Surgeon to St. Michael's Hospital;

AND

E. HERBERT ADAMS, M.D., D.D.S.

New York was the first city to establish a place for the microscopic examination of suspected diphtheria cases at public expense. Chicago has recently followed the good example.

PUBLIC HEALTH.

The health of the city of Toronto for the year 1894 has shown a more remarkable decline in the number of cases of and the number of deaths from contagious disease than has ever been known in the city's history. The number of deaths occurring from diphtheria in the city of Toronto in 1892 was 410; from the same disease in the year 1893, 263; in the year 1894, 84. The number of deaths occurring from typhoid in the year 1892 was 111; in the year 1893, 80; in the year 1894, 24. At present Toronto's death rate from typhoid fever is the lowest of all the great cities upon this continent, and averages but 17 per hundred thousand. In diphtheria Toronto's low death rate is third among the great cities of the continent.

A DEMONSTRATION.

Some idea of the specific value of vaccination in lessening the mortality of smallpox may be gathered from the following statistics: During the year 1893, 140 cases of smallpox were treated at the City Quarantine Hospital; of these 117 recovered, and 23 died. Of the 117 who recovered, 42 showed some evidences of vaccination, and in these cases the disease was uniformly of a mild type; while in the 75 showing no evidence of the operation, there were many cases of great severity; indeed, all of these showed a tendency to a severe form. Among the 23 cases which died not a single one had ever been vaccinated successfully. These facts are certainly most valuable proofs of the value of vaccination in inducing immunity against smallpox and lessening its mortality.—E. Garrott, M.D., Chief Medical Examiner, Chicago, Ill.

THE ABSORPTION OF ODORS BY MILK.

Parville (*Deutsche med. Zeitung*) relates some interesting facts upon this subject. If a can of milk is placed near an open vessel containing turpentine, the smell of turpentine is soon communicated to the milk. The same result occurs as regards tobacco, paraffin, asafoetida, camphor, and many other strong-smelling substances. Milk should also be kept at a distance from every volatile substance, and milk which has stood in sick chambers should never be drunk. The power of milk to disguise the taste of drugs—as potassium iodide, opium, salicylate, etc.—is well known.—*Medical Bulletin*.

TUBERCULOSIS IN INSANE ASYLUMS.

Dr. C. E. Riggs, Professor of Nervous and Mental Diseases in the University of Minnesota, in a recent article on "Some Irish Asylums," states that in the Killarney Asylum for the Insane "seventy per cent. of deaths are due to phthisis, caused by the damp climate." Such high percentage of deaths from consumption is too common in insane asylums, but it is not the damp climate, but the element of contagion, which is the cause; and until the tubercular insane are separated from the non-tubercular insane, the death rate will always be high. Is there an asylum in Canada where the insane consumptives in the expectorating stage of the disease are separated from the rest of the insane?

EXPEDITING THE CURRENT IN MEXICAN SEWERS.

A new project for the sanitation of the sewers in the city of Mexico, at a cost of about \$25,000, calls for the building of some twenty-five wind-mills in different parts of the city to rotate paddle-wheels in the sewers and quicken the current to 1 metre per second.—*El Universal*.

THE CREMATION OF GARBAGE.

The *Inventive Age* notes that there are now fifty-five towns and cities in England which destroy their garbage and solid refuse by burning, using an average of about ten furnaces each for that purpose. The combustion of the material is used for the generation of steam, by which the streets are electrically illuminated, and other cities are reported to be considering the propriety of reducing their municipal expenses by this means. The Livet, the latest introduced method, is stated to burn on an average 331 pounds of rubbish per hour for each square foot of grate surface, with an evaporation of 4.08 pounds of water for each pound of rubbish consumed. In this way science is showing what profit there is in what has been regarded as waste and filth, to be used in contaminating public drinking water or getting rid of it in some other way.—*Sanitarian*.

Editorials.

A NEW DEPARTURE.

THERE are times when we can, without prejudice, congratulate our contemporaries. In the January number of the *Dominion Medical Monthly* we have noted a small advertisement—hid amongst the *pot-pourri* of others—which signals a material change in that journal's career. The advertisement states that the subscription rate is one dollar per annum. The manner in which this statement is made is altogether too modest. There is nothing to be ashamed of in such a move, and any journal developing from a free-gift advertising journal to a regular subscription journal deserves congratulation.

The *motif* we would not for a moment discuss, but that little advertisement will, undoubtedly, be used to arrange matters with the Government. The mailing privilege is free mail to purely legitimate journals—that is, journals with a *bona fide* subscribed circulation, but not to journals which exist as advertising mediums solely. As we said before, we will in no way impute a *motif*. Then, another point of congratulation and journalistic advancement. The same journal issues an *édition de luxe* and an *édition ordinaire*. One of the former we found in the hands of an advertiser, and the latter is the one which is gratuitously distributed to the profession. Really, it ought to be the other way about. Undoubtedly, the advertiser would rather have the subscriber get his *édition de luxe*, and he could put up with the one on poorer and lighter paper; but, of course, these things cannot be accounted for. We refrain from any further congratulation, and omit any mention about a foreign issue that an advertising firm assured the writer was published. It might be unkind to refer to the law about the receiving of a journal from the mail, constituting the recipient a subscriber and making him liable for the subscription rate; so we will also omit that. Yet it does one good to see a new leaf turned over and a purely advertising medium become a subscription journal, even if the circulation must tumble.

HISTORY OF MEDICINE.

THE calendar of the Medical Faculty of the University for the session of 1894-95 contained the announcement that a course of ten public lectures would be given by members of the Faculty on the History of Medicine. It was expected that the series of lectures would give a connected account of the subject down to the sixteenth century, and that another set of lectures, to be delivered in the session of 1895-96, would deal similarly with it for the then remaining centuries.

Professor Ramsay Wright delivered the first lecture of the course, January 8th, on "Mythical Medicine and the Worship of *Æsculapius*." Three additional lectures were delivered during the month of January on the following subjects: "Hippokrates," "Alexandrian Medicine," and "Roman Medicine," by Professors A. B. Macallum, A. H. Wright, and J. E. Graham. The lectures were very interesting, but it was found that the examinations were so close at hand that students felt that they had scarcely sufficient time to attend.

The Medical Faculty, at its last regular meeting, considered the matter from the students' point of view, and decided to postpone the delivery of the remainder of the course until next session. The following are the subjects which remain: "The Eclectics—Galen," by Prof. John Caven; "Græco-Arabian Medicine," by Prof. G. A. Peters; "Monastic Medicine," by Prof. J. M. MacCallum; "Scholastic Medicine," by Prof. William Oldright; "The Revival of the Study of Human Anatomy," by Prof. A. Primrose; "The Commencement of Modern Medicine—Paracelsus," by Prof. A. McPhedran.

THE OYSTER AS A TYPHOID CARRIER.

THERE has been a certain amount of excitement recently respecting the oyster as a possible cause of typhoid fever. Dr. H. W. Conn, Professor of Biology in the Wesleyan University, Middletown, Connecticut, published in the *New York Medical Record* a report respecting an epidemic of typhoid among the students which occurred in October and November, 1894. He produced a chain of evidence which proved pretty conclusively that the disease was caused by eating oysters. The offending oysters had been grown in the deep water of Long Island Sound, but had been placed in a fresh water stream for a day or two, to freshen, or "fatten." It was afterwards discovered that a sewer coming from a house containing two typhoid fever patients emptied into the stream close to the place where the oysters had been freshened.

In the *British Medical Journal*, January 12th, 1895, we find a letter from Sir William Broadbent, M.D., giving reports of several cases of typhoid fever among the wealthier classes in London, in which there was almost absolute certainty that the infection had been transmitted by oysters. The *Journal*, in an editorial on the subject, after referring to the letter, says: "The cumulative weight of the facts will, we apprehend, be generally accepted as considerable. The exclusion of all the ordinary sources of typhoid fever, and the peculiar incidence of the disease in certain families, on those members only who had partaken of uncooked oysters, and the further fact that this consumption of oysters appears to be the only circumstance common to the case, afford a very strong presumption for the view that these succulent bivalves were in some way the means of conveying infection."

The *Journal* goes on to state that this is not the first time that the oyster has been under suspicion in this respect. Sir Charles Cameron, in 1880, reported some cases at the Cambridge meeting of the British Medical Association, in which serious intestinal disease had been produced by the consumption of oysters. In 1890, there was a strong suspicion that certain typhoid fevers were caused in a similar way. The idea that raw oysters can cause typhoid fever has been ridiculed in certain quarters, but we are inclined to agree with the *British Medical Journal* in thinking that sufficient evidence has been produced as to the probability of the occasional conveyance of the infection to warrant us in accepting it as a fact.

REPEATING BY DRUGGISTS.

WE are quite in sympathy with much that has been said about the practice of repeating prescriptions without permission, which has become so common in Toronto. We consider that no arguments are required to prove that such acts on the part of druggists are not just to the physicians, while, at the same time, they are frequently dangerous for the patients. The subject has been discussed on two occasions by the members of the Medical Society of the West Toronto Territorial Division, and at the last meeting was relegated to a committee, with instructions to consider and report. In connection with the subject there are at least two questions of considerable importance.

(1) Who owns the prescription?

There seems to be an impression that the courts have decided that the physician owns the prescription, and that neither the patient nor the druggist has any legal right to use it a second time. We know of no such decision, and feel almost certain that none such has been given on this

continent. We quote as follows from Hamilton's "System of Legal Medicine" (an admirable work, by the way): "Who owns the prescription? is a question frequently asked by physicians, but not as yet answered by the courts. In his treatise on medical jurisprudence, Ordonaux has devoted some pages to its discussion; but the matter is one of academic rather than of practical interest. The patient pays for advice. He receives a prescription orally or in writing. It is his. He can take it as often as he wishes at his own risk, or give it to his friends. No one has ever pretended that a lawyer can forbid a client repeating the legal advice given to him. Perhaps a contract might be made with the patient not to 'repeat the prescription'; but then, if he breaks the agreement, what is the physician's measure of damages? If, indeed, the patient put up the prescription as a patent medicine, and advertise under the physician's name, this might be a libel; but the gist of the offence would be not selling the prescription, but imputing unprofessional conduct. There is no practical method of preventing a patient from repeatedly swallowing a prescription intended for a single occasion, except to give him the actual remedy, after the old fashion, now again coming into vogue, or else to make the dose so disagreeable that to take it will be a pain rather than a pleasure."

(2) Shall we seek remedial legislation from the Ontario Parliament?

No, decidedly no, for the simple reason that we can't get anything of the sort. If we asked for it the cry of "class legislation" would speedily swell into a roar which would effectually drown our plaintive cries.

We have nothing original to suggest in the premises, and can only recommend one of two courses: (1) Either make some amicable arrangement with the druggists, a portion of whom are disposed to treat the profession fairly; or (2) dispense our own medicines.

Meetings of Medical Societies.

TORONTO CLINICAL SOCIETY.

(Continued from page 72.)

TUMOR OF THE CEREBELLUM.

Dr. D. C. Meyers : The case I have to show to-night is one that I will read you the history of as taken from my case book.

This young man's age is twenty-six ; he is unmarried, dentist by profession. In regard to family history, all the family are highly strung. The father is sixty-eight years of age, and nervous. He has eight brothers and sisters, who are all more or less so. The mother, however, is quite well. His grandfather died of hæmorrhage of the lungs, and there was consumption in his grandmother's family. The father tells me one child died of hydrocephalus. In regard to his previous health, he has always been fairly strong, is nervous, and troubled much with headaches. About eight years ago he had some kidney trouble and rheumatism. He has been much confined to his office since he was sixteen. His present illness began about five years ago, after excessive work from taking a diploma. At this time he had an attack during which he was entirely paralyzed, and was unconscious, or partially so, for ten days. This attack came on suddenly. The temperature rose to 103° , and he was confined to bed about six weeks. Both sides of body attacked, left more than right. The arms recovered first. He went to Picton, where, after ten days, he had another attack with paralysis lasting three months. He gradually improved and began to work again until the following summer, when he overworked himself, but after a rest in Muskoka he worked during the winter. Stiffness in his legs, however, always continued. The next summer he had dysentery about three weeks, then he was better during the winter. In the spring two years ago he felt bad and underwent the Salisbury treatment, and his eyes have been bad ever since. He went to Nebraska last winter, and since his general condition has been good, except for his legs, which are very troublesome. He has not worked for a year and a half, and walking is growing steadily worse. Sleep and appetite very good ; bowels very constipated ; in five years he scarcely had

a natural motion. At one time he had trouble to pass his urine; his physicians used a sound, he said, to enlarge urethra. He very often has to wait for urine to pass, and propulsion is not good. He now passes a fair quantity, and he says it smelt ammoniacal. He has been very dizzy at times, so that things would swim, and it was very difficult for him to maintain his equilibrium. He would often have a feeling of intense nausea when getting up in the morning, after dizziness, but he did not vomit, nor has he vomited at any time. Headaches uncommon at present, although they are said to have been severe. His sight is bad; speech was affected at one time, due to inability to pronounce. He was unable at one time to use his knife or fork from weakness. For light touch he now uses his right hand. Dy. L. 67 R. 85. Knee-jerks markedly increased on both sides, and equal. Slight ankle clonus on both sides. He says there was marked loss of sensation in left hand at one time, but that it is now better, though occasionally numb. Sensibility to pain slightly dull over whole body, but perhaps more marked on left side. Complaints of sense of pressure over occiput at times when nausea in stomach. Strength of legs unimpaired, understanding unimpaired. While standing patient has feet wide apart to maintain his equilibrium, which he can do unaided only with difficulty. He fell off the sofa when dressing from a sitting posture in my office, and no muscular atrophy. Heart and lungs normal; respiration is very slow, seven or eight per minute; pulse 76. He says knee-jerks were lost at one time. Eye discs, both atrophied and gray, balance not markedly affected, with eyes closed. He says he has never had lightning pains. He walks with feet wide apart, and like a drunken man. He has some inco-ordination in legs and hands; does not stamp feet; says he can put them where he wants them. He is slightly more unsteady when walking with eyes closed, but he puts his feet down without excursion, and can place them quite well near together when held by the hand. Has plantar reflex gone. Tendons of foot twitch markedly when standing. Dr. Ryerson kindly informs me that five and a half years ago there was distinct papillitis in both discs. At that time patient was unsteady in walking, and required assistance. I drew off urine—about eight ounces. He had not micturated for five hours. Patient has some lateral nystagmus, no mental symptoms, patient being perfectly bright and intelligent.

The first question which naturally arises is, Where is the seat of the trouble? The increased reflexes, the inco-ordination, the nystagmus, the optic atrophy, would point strongly to an affection of the cord, ataxic paraplegia. On the other hand, the marked giddiness, the respiratory trouble, and especially the fact that papillitis (or choked disc) preceded the present optic atrophy and the difficulty in maintaining his equilibrium, indicate an affection of the brain, which a consideration of

the symptoms compels one to think a tumor. Under these circumstances (unless we suppose the presence of more than one tumor) the growth must be in such a position as to compress both pyramidal tracts, cause inco-ordination and disturbance of the equilibrium. The most probable situation for such a growth is the cerebellum, particularly the middle lobe. As you are all aware, an affection of the semi-circular canals of the ear or of that portion of the auditory nerve connected with the ampulla will cause a loss of equilibrium, and in this case I believe the vestibular portion of the auditory nerve, in its course to the cerebellum, is affected, having a disturbance of equilibrium as a consequence. The cause of the increased reflexes lies in the fact that the pyramidal tracts of the cord are pressed upon, and, probably, degenerated as a result. The loss of co-ordination may be explained by a derangement of those sensory impulses which, passing through the posterior columns of the cord, go thence to the cerebellum. In fact, we have here, in regard to the reflexes and the inco-ordination, precisely the same result that we would have from a primary affection of the cord implicating the motor part of the lateral columns and the mesial portion of the posterior columns, the only difference being that these same results are due to an affection in another part, and are, consequently, secondary. In regard to the nature of the growth, a gumma need scarcely be considered, owing to its position and the history of the patient. The two most likely forms of tumor are tubercle and glioma. And, of these, the presence of tubercle in the family and the fact that tubercle is a most common tumor of the cerebellum leads me to believe this to be the nature of the growth. I, therefore, consider the case to be a tumor of the middle lobe of the cerebellum, probably tubercular in its nature.

Dr. Graham : I have listened with a great deal of pleasure to Dr. Meyers' report of this case, and I would not pretend to offer any opinion in opposition to his, even if I were strongly of the opposite opinion, because he has had every opportunity of studying the case, which I have not had. But it occurred to me that there were some objections to the theory of tumor in the case. For instance, he has never vomited ; he has not had dizziness.

Dr. Meyers : Yes, very marked.

Dr. Graham : I did not understand that. But he has not fallen down.

Dr. Meyers : He rolled on to the floor from the sofa the other night, but that is the first time he said he had noticed it.

Dr. Graham : If, for instance, he had papillitis five years ago, and if that was due to tumor, one would think it would show some evidence of falling, for that is one of the commonest things that I have seen—that they often fall backwards. Those are generally put down as the cardinal

symptoms—and headache. There is headache, dizziness, want of retaining equilibrium, and, finally, the vomiting; of these four there is only the dizziness as the cardinal symptoms of tumor. I am rather of the opinion that Dr. Meyers first came to, that it is ataxic paraplegia, with the exception of those previous conditions; that is, papillitis. Might that papillitis not have been due to meningitis? That would account for his headache. I think all the other symptoms would account for ataxic paraplegia. He has only the one sign of the tumor.

Dr. Ryerson: My recollection of the beginning of this case is that he was brought to me by Dr. Burns, and he had, at that time, studied excessively for passing an examination for doctor of dental surgery, and it was thought to be due to over-exertion; but there was nothing to show that would cause neuritis. I only saw him once, and I heard, a few days afterwards, that he had been attacked with paralysis. That is about all I know of him.

Dr. Cassidy: Is it reasonable to think a man would have tubercle of the brain all that time without showing some signs in the other parts of his body—his lungs; and what tubercles exist in the brain for five years without having appearance of tubercle in other organs? I think most of the authorities that speak about brain tumor state that. You would naturally expect to get a tubercle in a young person. I think it is put down generally, as far as my recollection goes, which certainly would count in favor of cancer. In cases of tuberculosis I suppose that age would be an important feature, and, this man being twenty-six years of age, that would be rather in favor of tumor; and, assuming that tumor is proved, that it would be tubercular. But I understand there was no evidence of tuberculosis in any other part of the body, which would certainly be negatively against that.

Dr. Atherton: I would like to ask Dr. Meyers how he explains the sudden access of paralysis five years ago, and then the improvement afterwards.

Dr. Ross: My experience in these cases is, simply, that I had one case that was shown to the society two years ago. This man's movements remind me very much of it. It was a young girl, and she had tubercular tumor in the middle lobe of the cerebellum, low down behind, and, I think, affecting both sides, if I remember correctly. In that case the first evidence of any trouble was an hysterical attack, so much so that when I saw her I thought it was a mere attack of hysteria, and was very nearly advising the mother to give the child a good spanking. But I went home and read up something, and thought I was wrong. The post-mortem examination showed a large mass of tubercles. However, she had no paralytic symptoms whatever. She went down to Dr. Reeve, and

her eyes were examined, and the day she died she drove with me in my carriage to the Sick Children's Hospital, and I met her down at the corner of the street, and she had this peculiar walk, the same as this young man's. She walked home and had a convulsion; they sent down for me and I was in the house inside of ten minutes, and before I was there she was dead. Her mother had six or seven sisters; all died of it. In her case it ran a very rapid course. She was a young girl, about fourteen or fifteen. She was sick from the time it first commenced, not more than about ten months. To my mind, there is one point that is rather against the theory of either tubercle or tumor, and rather in favor of some previous condition, whatever it may have been, and, consequently, something such as Dr. Graham speaks of as attacks of ataxic paraplegia.

Dr. Meyers: In regard to what Dr. Graham has said of the papillitis five years ago, there is one point about tubercle in the brain, and that is that it belongs to the fastest as well as to the slowest growths, and the tubercle sometimes may have a rapid progression, and at other times it will go on for years without producing but a very slight increase of symptom.

In regard to ataxic paraplegia that was the point that raised the greatest difficulties in my mind, and without assistance on one or two points, particularly, as I say, the occurrence of choked disc, which would be unknown in attacks of paraplegia. Atrophy in itself is rare in ataxic paraplegia, and that was a point very much in favor of my deciding against it; and then there was the respiratory trouble as well, which would certainly seem to show that there was a lesion higher up in the brain.

There is another point about it. In attacks of ataxic paraplegia the ataxia is very much more marked than in this case. The ataxia here is slight, but the ataxia of ataxic paraplegia is very much greater. There is more excursion of motion, and the patient, when lying in bed and asked to describe a cross with his foot or touch his knee with the opposite heel, cannot do it without very great trouble, whereas this boy would do both very well, showing the ataxia was not marked.

There is one point in ataxic paraplegia, and that is the weakness of the legs, which is absent in this case. None of the muscles of the boy's legs were weak. He would do all motions well. He had a good amount of strength in both legs and pretty equal.

In regard to what Dr. Cassidy speaks of, in adults it is common, I may say, to find tubercle in other parts of the body, but at the same time I think tumor can exist in the brain and not exist in other parts of the body.

In regard to the sudden access of the trouble, it is an exceedingly difficult matter without any more history than I have got to form any conclusion as to what that trouble may have been. It may have been peripheral

neuritis, which comes on suddenly and paralyzed his whole body, as he said, and from which he recovered partially. He has good strength in both sides.

There is one point in what Dr. Ross has said, that was the connection of hysteria with organic troubles. I may say it is a very difficult point sometimes to diagnose and tell just when a case is hysteria and when there is organic disease simulating it. The only thing is to look for unequivocal signs of organic disease, and when those are present to discard the other.

Dr. Ross presented a specimen of ovarian tumor removed from the abdomen of a negress.

He said : She had it for five years, and it had given her no inconvenience, when all of a sudden she had an attack, temperature rising up to 105° , and complained of pain over the abdomen. I saw the patient and thought very likely it was a case of fibro-myoma, large size, and I advised its removal. It looked perfectly healthy when removed, and after cutting it open I found evidence of sarcomatous degeneration of the fibroid.

The meeting adjourned.

THE PATHOLOGICAL SOCIETY OF TORONTO.

AN open meeting of the society was held on Friday, Jan. 25th, 1895, at 8 p.m., in the Biological Building, the president, Dr. W. J. Greig, in the chair. An interesting programme was presented, as follows :

After a few introductory remarks of welcome to the visitors of the evening, Dr. Greig read a paper on the "Pathogenesis of Simple Gastric and Duodenal Ulcer" (see page 81).

Dr. McPhedran pointed to the fact that gastric ulcers occur commonly in young, anæmic females ; duodenal ulcers in older and healthy males, as showing that the pathogenesis of the two conditions probably differed widely. He thought that the various causes enumerated by the previous speaker no doubt came into action in different cases, yet that no one of them was constant. He differed to the hyperacidity of the gastric contents in chlorosis as one reason why gastric ulcers were frequent in that disease, and suggested that duodenal ulcers in healthy males might often be due to traumatism, produced by the excessive ingestion of partially masticated food, which passed on to the duodenum without proper digestion in the stomach.

Dr. Caven referred to the very varying degrees of resistance to adverse circumstances exhibited by different cells in the same organism, and by corresponding cells in different organisms, and offered the suggestion that

the vital resistance of the duodenal mucosa in healthy males might be no greater than that of the gastric mucosa in chlorotic females.

Dr. Greig, in closing the discussion, believed that in his case the ulceration was due to local malnutrition, the result of arterial degeneration, which could be readily detected in at least some of the patient's vessels.

ANATOMY OF THE APPENDIX.

Dr. Caven then read a paper on the above subject.*

Dr. Peters thought that inflammation of the appendix occurred more commonly in appendices which occupied an abnormal position than in those lying in the position generally considered normal. Also, that inflammation occurring in a normally placed appendix was more dangerous than in one abnormally placed, since in the former case localization of the resulting abscess by adhesions did not take place as readily as in the latter, so that the general peritoneum was more often affected. He quoted a number of cases in his own experience supporting this view. He thought that the operation of opening an appendical abscess extraperitoneally could but rarely be done.

Dr. Barnhart agreed with Dr. Peters as to the relatively greater frequency of the occurrence of inflammation in misplaced appendices. He had examined from fifty to seventy subjects with regard to the position of the appendix, and had found many variations, few of which were mentioned in anatomical text-books. The length in his cases varied from $1\frac{1}{4}$ to $6\frac{1}{2}$ inches, the maximum being found between the tenth and thirtieth years. After the thirtieth year both length and diameter began to diminish, leading sometimes to complete obliteration. He had found typhoid ulceration in one appendix, carcinoma of the meso-appendix in another case, two tubercular appendices, and one cystic. He referred to a case which presented no symptoms of appendicitis ante-mortem, in which post-mortem an appendical abscess was found in the true pelvis.

Dr. Caven agreed with the statements of the previous speakers, both with regard to the greater frequency of inflammation in abnormally placed appendices, and also to the greater seriousness of inflammation in an appendix normally placed.

Drs. McPhedran and Caven then presented the clinical and post-mortem notes of a case of "adenoma of the duodenum," which will be published later.

Dr. Hill presented gross and microscopic specimens from a case of carcinoma in the splenic flexure of the colon producing obstruction, terminating fatally.

The meeting then adjourned.

*Will appear in March issue.

TORONTO MEDICAL SOCIETY.

THE regular meeting of the above society was held on January 17, 1895, the President, Dr. Peters, in the chair.

SCLERODERMA.

Dr. McPhedran presented a patient suffering from scleroderma. It commenced about nine months ago, a white spot being first noticed in the forehead, which presented something of the appearance of a chalk mark. It extended upward upon the head about two inches within the margin of the hair line. Its width was about half an inch. The patch became completely bald. Thickening of the skin and the tissue beneath has taken place. It is slightly anæsthetic. The doctor gave a description of the pathological condition and outlined the treatment.

URETHRAL CALCULUS.

Dr. Peters showed a unurethral calculus which he had removed from a boy seven years of age. The history of its presence lasted from the patient's birth. At the age of four he received a blow in the perinæum. Since then he has had frequent passages of bloody urine, accompanied with great pain. The urine kept continually running away. On passing a sound the stone could be distinctly felt at the membranous portion of the urethra. Median incision was made, but on applying the forceps it slipped into the bladder. The opening was enlarged and the stone extracted. The doctor outlined the methods employed in the analysis of the various urinary calculi.

Dr. Atherton also presented a large urethral calculus which he had discovered accidentally upon operating on a patient for extravasation of urine resulting from an injury in the perinæum, the history of which he had given at a previous meeting of the society.

DISSECTING AORTIC ANEURISM.

Dr. R. J. Wilson presented a specimen of dissecting aortic aneurism. The patient was forty-two years of age, of good habits, and a good family history. The doctor was called early one morning, when he found the patient suffering great pain in the left groin, and in the back, radiating from the region of the left kidney, extending into the left testicle and to the end of the penis. The testicle was retracted. He was treated for renal colic, morphia being given. The patient got up at about six o'clock to urinate, but died before he got back to bed. The specimen showed that rupture had taken place at the commencement of the descending aorta. The coats were separated down to the point at which the vessel had been severed upon removal. There was no evidence of kidney disease. Some calcareous deposit was detected on the aorta. No evidence

of any cause for renal colic was made out. Was the pain complained of the result of the aneurism? the doctor asked. Dr. Peters said that the pain might have been produced by pressure on the lumbar plexus.

SPINA BIFIDA.

Dr. Oldright presented a child five weeks old suffering from spina bifida. The tumor involves a portion of the sacral, all the lumbar, and the lower two dorsal vertebræ. The members examined it by transmitted light, an electric lamp being used for that purpose. Although no portion of the cord could be seen, yet the doctor considered that a portion of the cord was involved because of its large size and its position, and the complete paralysis of the lower extremities. On tapping the lower part of the tumor distinct twitchings of the legs occurred. As to treatment, he had been using pressure. He asked the opinion of the society as to the wisdom of further interference. The only other child had died, and the parents were much wrapped up in this one, and he felt somewhat loath in resorting to operation. Dr. Peters reported having operated upon a case unsuccessfully. He did not think the involvement of the cord was a contraindication to operation. He thought he would favor operation on the case.

Dr. Atherton said that he would try the injection of Morton's fluid. If this were insufficient to effect a cure, he would state to the parents the possibilities and the probabilities in case of operation, and in case operation were not performed; and then he would advise operation.

Dr. McMahon said that from his observations on three cases of spina bifida he had concluded the conservative treatment was best.

Dr. Wilson, of Richmond Hill, said that looking from a scientific standpoint at the case he would operate, but from the standpoint of the mother he would leave it alone.

Dr. Oldright stated that statistics show only about three or four per cent. of recoveries. He seemed rather inclined to the non-operative treatment.

APPENDICITIS.

Dr. Bryans gave the history of a case of appendicitis with the ordinary symptoms. The patient had a somewhat similar attack some months before.

Dr. Atherton said that a twin brother had suffered from peritonitis. When called to assist Dr. Bryans with the case he decided that operation was called for because of the previous attacks of colicky pains, which were growing worse and worse, because the patient's symptoms were increasing in spite of opiates, and because of the successful results which accompany early operation.

On opening, a coil of small intestine was found running beside the cæcum and attached to it. Following this down with the finger to the brim of the true pelvis the appendix was reached, which extended into the pelvis, where it was adherent pretty firmly. Drawing it out its mesentery was torn, and the appendix itself was found to be rotten. It was distended to the size of his ring finger, and the contents were greenish-looking and stinking. A ligature was made around it close to the cæcum, and the stump touched with pure carbolic acid. An iodoform gauze drain was left in for forty hours, after which the provisional sutures were tightened. The patient is doing well. The members examined the specimen.

Dr. Peters presented an appendix which had been removed from a patient who had had recurrent attacks. A tumor was noticed in the pelvis by palpation per rectum. A median incision was made. The appendix was hanging over the brim of the pelvis reaching to the aforesaid mass. It was firmly adherent, very thick, and a foreign body could be felt very distinctly. The muscular and serous coats were dissected back, a ligature thrown around the mucous coat. The stump was touched with carbolic and pocketed by an infolding of the muscular and serous coats, the latter of which were approximated by a row of sutures.

The society then adjourned.

HURON MEDICAL ASSOCIATION.

The Huron Medical Association met in Seaforth on the 15th ult., with Dr. Turnbull, president, in the chair. Papers were presented by Drs. Campbell and Burrows, Seaforth.

Dr. Graham, Brussels, introduced the question of the manner of collecting the Medical Council fee, and this elicited considerable discussion.

The subject of medical ethics was taken up by Dr. Wood, of Mitchell; Dr. Bethune, of Seaforth; and Dr. Shaw, of Clinton.

The annual election of officers resulted in the appointment of Dr. A. Dalton Smith, of Mitchell, as president; Dr. A. Bethune, of Seaforth, as vice-president; and Dr. Mackay, of Seaforth, as secretary-treasurer.

WEST TORONTO TERRITORIAL MEDICAL DIVISION ASSOCIATION.

The annual meeting of the West Toronto Medical Division Association was held in Broadway Hall on January 12th, at which a large representation of the members of the division was present.

The subjects of lodge practice, account collecting (including a black list of bad-pay patients), and repetition of prescriptions by druggists were discussed, and committees appointed to consider each of these and report at the April meeting.

The election of officers resulted as follows : President, H. T. Machell ; first vice-president, A. A. Macdonald ; second vice-president, A. Hamilton ; secretary-treasurer, George H. Carveth. Council : A. McPhedran, J. Spence, J. Ferguson.

The next regular meeting of the association will be held in Broadway Hall on Wednesday, April 10th, at 4 o'clock.

MARYLAND CLINICAL SOCIETY.

STATED meeting, held January 18th, 1894.

Dr. Simon Flexner read a paper on the pathology and bacteriology of diphtheria.

Dr. L. F. Barker then addressed the society upon "The Antitoxin Treatment of Diphtheria."*

Dr. N. C. Kierle explained the differences between the diphtheria in the human being and that of the pigeon and fowls. He exhibited several birds, some having true diphtheria, others the mixed infection.

Dr. J. H. Branham reported upon two cases of diphtheria in which he had used the antitoxin treatment :

CASE 1. Little girl, seven years of age ; had been ailing for about two weeks with a slight sore throat and injection of the mucous membrane over the tonsil. The diphtheritic membrane appeared first upon the uvula. At that time the child was not very sick, having a pulse of 90, and temperature 100°. He made a small injection of antitoxin on the 6th, about eighteen hours after the membrane appeared. On the same day a second dose was given, much larger, at about 4 p.m. The pulse was then 120, temperature 101.6°. The next morning both pulse and temperature had gone higher, when he changed and gave an injection of a new solution. On the 8th the temperature in the morning was 102°, pulse 130. Patient not very much improved. At 9 p.m. a full dose of Behring's solution (12 cubic centimetres) was given. The next morning the temperature, after twelve hours, was nearly normal, and the patient proceeded to recovery very rapidly. The first solution used was obtained from Pasteur's New York laboratory, but within twelve hours after giving a full dose of the Behring solution the patient was very much better, and practically has not been sick since.

CASE 2. Patient first seen on the fourth day of disease ; had been treated by another physician with the ordinary remedies. Bacteriological

*See page 99.

examination was made, and a dose of the Pasteur material given on the fifth day. On the next day there was a decided manifestation of laryngeal involvement. A full dose of the Behring solution No. 2 was then given. Sixteen hours later, in a fit of coughing, a cast of the larynx was brought up which showed the bacteria. After that time the pulse and temperature came down to normal, and did not again rise. The patient recovered rapidly. A full dose in both cases seemed to act beautifully.

Dr. J. F. Martenet : I desire to report an interesting case, in which I had the opportunity to use this remedy. The case was that of a child two years old who had been sick ten days. It was primarily a laryngeal case. Another physician had been treating it, and gave the case up as hopeless. When I saw it the larynx and trachea were full of the membrane, and breathing was very difficult. I gave the first injection of antitoxin that evening, and the second dose the following morning, the respiration having by that time somewhat improved. In the evening, however, it was worse. The larynx was almost occluded, and the child could scarcely breathe. The temperature was 103° , respiration very rapid, the pulse rapid and weak. I could not get more of the antitoxin at that time, so I had to try tracheotomy, and left the tube in all night. Next morning the child was apparently dying. We removed the tube, and the child, getting more air, improved somewhat. By the next day I had succeeded in obtaining more of the antitoxin, and gave a third injection. Improvement went on rapidly, and by the following day the child was practically well. Bacteriological examination showed it to have been a case of mixed infection. Tracheotomy undoubtedly helped to save the child's life, but it may have been by giving the antitoxin an opportunity to produce its effect.

Book Reviews.

THE F. A. Davis Co. will issue shortly a treatise on "Suggestive Therapeutics in Psychopathia Sexualis," by Dr. R. Von Kräfft-Ebing, translated by Dr. A. Schrenk-Notzing.

THE work on obstetric surgery by Drs. Egbert H. Grandin and George W. Jarman, recently published by the F. A. Davis Co., of Philadelphia, has been well received.

PRACTICAL URANALYSIS AND URINARY DIAGNOSIS : A Manual for the Use of Physicians, Surgeons, and Students. By Charles W. Purdy, M.D., Queen's University ; Fellow of the Royal College of Physicians and Surgeons, Kingston ; Professor of Urology and Urinary Diagnosis at the Chicago Post-graduate Medical School. Author of "Bright's Disease and Allied Affections of the Kidneys" ; also of "Diabetes : Its Causes, Symptoms, and Treatment." With numerous illustrations, including photo-engravings and colored plates. In one crown octavo volume, 360 pages, in extra cloth, \$2.50 net. Philadelphia : The F. A. Davis Co., Publishers, 1914 and 1916 Cherry street.

The work before us is one of which we can speak in the highest terms. An accurate uranalysis is important in so many diseases that no physician can be excused for not being up to date in the subject. Dr. Purdy, a Canadian, has presented in the above an admirable work on the subject, and put the matter before us in such a readable shape that the interest is much increased. The analysis of the normal urine is thoroughly explained, and the latest and most accurate methods of estimating any increase above normal of its salts and solids carefully set forth. The abnormal urine, of course, receives the greater attention, and the work is replete with methods of detecting correctly the changes evolved during the course of disease. In the chapter on anatomical sediments we find that cylindroids are referred to as possibly being mistaken for casts. Thomas first drew attention to these cast-like substances, and to the differences between them and true casts.

The second part of the work Dr. Purdy devotes to urinary diagnosis, and we can congratulate him on the able manner in which it is handled. It will undoubtedly aid many of us in unravelling some of the cases that are perplexing in arriving at a diagnosis. An appendix is added on the subject of urinary examination for life insurance. Possibly this will act favorably both to the company and the applicant. There is no doubt that many good risks

are refused from a faulty or too hasty examination of the urine, and possibly some are passed who should be refused. The book should be in the hands of every physician, and its contents thoroughly mastered. All require the information that it contains. The book is printed in clear, bold type, and reflects credit on the publishers.

Pamphlets and reprints received :

INTESTINAL ANASTOMOSIS. With the Report of a Case. By Frederick Holme Wiggin, M.D., New York. Reprinted from the *New York Medical Journal*.

ON THE TREATMENT OF SOME FORMS OF PURULENT AND OFFENSIVE URINE. By Reginald Harrison, F.R.C.S., Surgeon to St. Peter's Hospital. London : John Bale & Sons, Oxford street, W.

SYPHILIS BY CONCEPTION. By George Duffield, M.D., Professor of Clinical Medicine in the Detroit College of Medicine, Attending Physician to Harper Hospital, etc. Reprinted from the *Medical News*, September 15, 1894.

THE OPERATION OF SUPRAPUBIC CYSTOTOMY AND THE INDICATIONS FOR ITS USE. By R. W. Stewart, M.D., M.R.C.S., Surgeon to Mercy Hospital, Pittsburgh, Pa. Reprinted from the *Pittsburgh Medical Review*, November, 1894.

CHROMICIZED CATGUT AS A MEANS OF DIRECT FIXATION IN THE TREATMENT OF FRACTURES AND OSTEOTOMIES, WITH A REPORT OF A CASE. By F. W. Jay, M.D., Chicago. Reprinted from the *Journal of the American Medical Association*, May 19, 1894.

Medical Items.

LADY PAGET, wife of Sir James Paget, died January 7th, at the age of 80.

DR. W. B. KENNEDY, of Guelph, left his home, February 11th, intending to go to Florida, where he will remain until spring.

PROF. J. BURDEN SANDERSON has been appointed Regius Professor of Medicine in the University of Oxford, in the place of Sir Henry Acland.

DR. JAMES REA, of Toronto, left his home, February 8th, for an extended trip. He will probably visit Florida, Mexico, California, and British Columbia.

DR. V. P. GIBNEY, surgeon-in-chief to the Hospital for the Ruptured and Crippled, New York, has been appointed Professor of Clinical Surgery in the College of Physicians and Surgeons.

DR. F. J. QUINLAN.—At a recent meeting of the Faculty of the New York Polyclinic, Dr. Francis J. Quinlan was elected Adjunct Professor of Laryngology and Rhinology.—*Medical Record*.

DR. L. M. SWEETNAM, of Toronto, is still in Baltimore, where he is actively engaged in medical work at Johns Hopkins Hospital. We are glad to be able to announce that he has quite recovered from his recent illness.

A GOOD EXAMPLE.—The city of Sydney, Australia, has imposed a fine of one pound sterling upon any person convicted of spitting upon the floor of public buildings or upon the street.—*Boston Medical and Surgical Journal*.

THE DOCTOR.—Lady (quizzingly, to physician)—“So you also are a conductor on the road to eternity?”

Physician—“I beg your pardon, madam; I am merely a brakeman.”—*Paris Illustration*.

SEWER AIR AND DIPHTHERIA.—A correspondent of *The Lancet* writes that a year or two ago a new system of main sewerage with the ordinary road-level ventilators was inaugurated in one of the suburbs of London, and upon its being brought into use serious cases of diphtheria almost immediately began to break out. The medical officer of health at once had the drains flushed with a strong solution of perchloride of mercury, and the cases then stopped almost as quickly as they commenced.

TWO EXCELLENT HINTS FOR PRACTITIONERS.—Dr. Cocksedge, of Wales, places the following “tips” at the disposal of his brethren: If you have a

fatiguingly deaf patient to talk to, place the ear-pieces of your binaural stethoscope in the patient's ears, and talk into the chest-piece, and you have an excellent ear-trumpet. If you leave your spectacles at home, being old and apresbyopic, make a hole with a pin in the corner of your visiting card, and you can read your clinical thermometer or anything else.—*Medical Press*.

AN Anti-Kissing Club has been started at Detroit. The members go about and do not kiss people. A similar club was started some time ago, I believe, somewhere in Asia Minor. But the waves of enthusiasm have not yet met. The movement is sporadic, and the blacklegs are too many. The members of the Detroit Club have been frightened by the doctors, who say that if you kiss a person who has diphtheria you catch diphtheria. Similarly, if you sleep in a damp bed you get rheumatic fever, which only seems to prove that you should be careful where you sleep, and not that you should never go to bed at all. Likewise—but it is hardly necessary to complete the argument.—*Pall Mall Budget*.

PRIZE OF THE AMERICAN NEUROLOGICAL ASSOCIATION.—The American Neurological Association offers a prize of \$200 for the best essay on any subject connected with neurological science. This competition is open to physicians who are legal residents of states in North and South America. Essays must be sent to the secretary of the association on or before May 10, 1895. Each essay shall be accompanied by a sealed envelope containing the name and address of the author, and bearing on the outside a motto, which shall also be inscribed upon the essay. Essays shall be typewritten, in either the English or French languages, and with the pages securely fastened. The council of the association reserves the right to reject any or all essays judged unworthy of the award. Each essay must exhibit original research, and none will be accepted that has previously been published. Græme M. Hammond, M.D., Secretary, 58 West Forty-fifth Street, New York City.

A SLIGHT MISTAKE.—This is an instance where a bad cold caused a startling conversation. A modest young newspaper man was invited to a party at a residence where the home had recently been blessed with an addition to the family. Accompanied by his best girl he met his hostess at the door, and after customary salutations asked after the baby. The lady was suffering from a severe cold, which made her slightly deaf, and she mistakenly supposed that the young man was inquiring about her cold. She replied that though she usually had one every winter this was the worst she had ever had; it kept her awake at night a good deal at first and confined her to her bed. Then noticing that the scribe was becoming pale and nervous, she said that she could see by his looks that he was going to have one just like hers and asked him if he wished to lie down. The paper came out as usual the next week, but the editor has given up inquiring about babies.—*Medical Record*.

AGAIN we hear that McGill Medical Faculty wants Professor Osler, and would gladly make him President. We have heard indirectly that this distinguished Canadian is not likely to leave Johns Hopkins for some time. We

think the following sentences, which appeared in *THE CANADIAN PRACTITIONER*, January, 1894, will now, as then, explain the position fairly well: "What Dr. Osler's views or intentions are, we know not; but we cannot fail to recognize the fact that he occupies now probably the most desirable and most honorable position open to physicians in the world. While he has done much in the past, he is likely to do more in the future; he has magnificent opportunities for the sort of medical scientific work he likes, and grand possibilities before him. The friends of Johns Hopkins expect much from him in the further development of their great hospital, their laboratories, and their medical school; and, in equity, have certainly a very strong claim on him. Considering all the circumstances, it seems unlikely that Dr. Osler will come back to dwell in Canada, at least for some time to come."

OBITUARY.

DR. CHARLES CONLIFFE JOB, a homœopathic physician of Toronto, who graduated in 1867, died February 11th, 1895.

DR. WALTER HENDERSON.—Dr. Henderson, of Arthur, county of Wellington, died suddenly, January 30th, 1895. He was a licentiate of the Royal College of Surgeons, Edinburgh, 1855; also a licentiate in midwifery of the same college.

THE saddest event of the present session of Trinity Medical College was the death of one of its students, Mr. J. F. Pierce, February 14th, after a short illness from typhoid fever. He was twenty-three years of age, and in the third year of his medical course. The body was sent to Norwood, where his parents reside, February 15th. The Faculty and students, in a body, followed the remains to the station.

DR. ALFRED LEBBEUS LOOMIS.—Dr. A. L. Loomis, of New York, died January 23rd, after a short illness from pneumonia, at the age of sixty-four. He graduated in medicine in 1853, and at once commenced practice in New York. He paid special attention to medicine, and gained a high reputation for his knowledge of diseases of the chest early in his professional career. He was professor of medicine in the University of New York for more than thirty years. He was well known in Canada as well as in the United States, especially as a teacher and author. The works best known to Canadians were his "Lessons in Physical Diagnosis," and his "Text-book of Practical Medicine."

DR. JOHN EDWARD WHITE.—Dr. J. E. White, of Toronto, died suddenly at his late residence, 185 Carlton street, January 21, 1895. About four years ago he had a very severe attack of la grippe, from the effects of which he never fully recovered. He was able, however, as a rule, to do his ordinary work, and his entirely unexpected death was a great shock to his friends. He received his medical education in the Toronto School of Medicine, and graduated in the University of Toronto in 1870. After practising a few years in the country, he came to Toronto in 1877. He was well known to the physicians of Ontario, and was secretary of the Ontario Medical Association from 1881 to 1888. His well-known ability and energy contributed much towards the marked success of this society. He left a widow and three sons.

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EDITOR:

ADAM H. WRIGHT, B.A., M.D. Tor.

ASSOCIATE EDITORS:

JAMES F. W. ROSS, M.D. Tor.

JOHN CAVEN, B.A., M.D. Tor.

EDMUND E. KING, M.D. Tor.

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Original Communications.

A CASE OF PUERPERAL FEVER, WITH REMARKS.*

BY GEORGE T. MCKEOUGH, M.D., M.R.C.S. ENG., F.O.S. LOND.,
CHATHAM, ONT.

THE subject of my paper may seem somewhat commonplace, and yet, fortunately, owing to the fact that the etiology of puerperal fever, so called, is at present so perfectly and universally understood and appreciated, and its prophylaxis so thoroughly and conscientiously attended to, the disease is becoming more and more uncommon. It is devoutly to be hoped that it will eventually be eliminated entirely from the category of morbid processes, and known only historically as a terrible, devastating, contagious malady, which medical science of the nineteenth century quite blotted out of existence.

The following case, which I had the privilege of treating under the most favorable auspices in our public General Hospital, and the opportunity

*Read at the first meeting of the County of Kent Medical Society, January 9th, 1895.

of watching almost constantly, I thought might be of some interest to at least the younger men of our newborn society, and probably, by the discussion which I hope to elicit, refresh the memory of some of the older members.

I was called during the evening of November 13th last to see Mrs. F. D., aged 24, a healthy, well-nourished woman, who had been confined about sixty hours previously of her third child. Her attendant was an aged woman, who designated herself "an authorized midwife." The patient's face was flushed, and her countenance appeared apprehensive. She complained severely of her head and back aching. There was no tenderness over the abdomen. Her temperature was $102\frac{2}{3}^{\circ}$; pulse, 100; respiration, 24. The lochia was not as profuse as normal, and very slightly offensive. Her bowels had been thoroughly moved during the day by a dose of castor oil given in the morning. She was ordered ten grains of quinine, to be taken at once, and four grains every two hours subsequently, with half an ounce of whiskey every alternate hour, and a vaginal injection of a quart of carbolic acid lotion 1 in 40 every four hours, a new Davidson's syringe being obtained for the purpose. The following morning (November 14th) her symptoms were apparently better. She was in less distress; her temperature was $100\frac{1}{2}^{\circ}$, and pulse 94. The same treatment was continued. When I called again at 4 o'clock in the afternoon her temperature was 104° F., and all her symptoms were manifestly worse. I now felt sure that the case was one of puerperal septicæmia, and urged that the patient be at once taken to the hospital, where she would have attention that it would not be possible for her to receive at home.

Her residence was quite near, and by means of a stretcher this was soon accomplished. About one hour after her removal her temperature was $104\frac{3}{8}^{\circ}$, and pulse 110. She was in considerable discomfort and pain. The lochia was slightly offensive. Before proceeding to explore the uterus and administer an intra-uterine douche, I rendered my own hands aseptic by first scrubbing them thoroughly with soap and sterilized water, and afterwards by immersion in saturated solutions of permanganate of potash and oxalic acid, as carried out at the Johns Hopkins Hospital. My patient was then placed near the edge of the bed upon a Kelly's pad. Her thighs, pubes, and lower part of her abdomen were washed well with soap and water, and afterwards with a 1 to 2000 bichloride solution. A vaginal injection of a quart of 1 to 2000 bichloride solution was next administered, and the vagina and uterus carefully explored, the latter with the finger and dull curette. There were no lacerations or abrasions in the perinæum or vagina, and a very slight laceration of the cervix. A small quantity of débris, slightly foetid, came from the uterus. Another quart of a hot solution of corrosive sublimate, 1 to 4000, was then allowed to run slowly

into the uterus by means of a fountain syringe and a large glass uterine tube, the bag of the syringe being held about a foot above the fundus of the uterus. Care was taken that all fluid drained away from the uterus before the tube was removed. She was then placed in bed, and laid upon her side, to allow any remaining fluid in the vagina to flow away, and an aseptic pad placed over the vulva. Within fifteen minutes she had a chill, and her temperature, taken at 7 o'clock, shortly after the chill, was 107° F.; at 8 o'clock it had dropped to 104° F.; at 10 o'clock it was 101° F.; and at eleven it was normal. The temperature remained normal until noon the following day (November 15th). While the temperature was down she expressed herself as feeling well and comfortable. Quinine and stimulants were continued. Ergotin pills and the fluid extract of ergot were both tried, but, not agreeing with the stomach, had to be discontinued, but a hypodermic preparation was used occasionally for several days.

About noon of November 15th, the third day of her illness, the temperature, which had been normal for over twelve hours, began to rise again, and rapidly went up, until at 3 o'clock it was 104° F., and her pulse 120. Another intra-uterine douche was then used; no chill followed, but the temperature continued to rise until 5 o'clock, when it was registered 105° F. It then gradually subsided, and remained from 101° F. to 102° F. during the night and following day (November 16th), the fourth day of her illness, until the evening, when it gradually rose, and at 8 o'clock registered 103° F. A uterine douche was then used, the same precautions being taken as at the first. There was no chill following the administration of this douche, but the temperature again gradually rose to 104° F. an hour afterwards, and then slowly dropped to 101° F. by the next morning, November 17th, the fifth day of her illness. Hoping to prevent a further rise, and probably to still lower the temperature, an intra-uterine douche was again administered.

The temperature did fall to about 100° F., and remained near that point during the day and following night. On the morning of November 18th, the sixth day of her illness, the temperature was normal. When the intra-uterine douche was not used antiseptic vaginal injections were administered every four hours. The patient's bowels were kept freely open, usually by saline cathartics. Quinine, iron, and stimulants were given freely. Her diet was limited to milk, which she took freely. When her temperature was normal, or nearly so, she felt, to use her own words, "splendid," but as soon as her temperature rose she became anxious, asked frequently "if we thought she would get well"; her limbs slightly, but chiefly her head and back, ached. She was restless, and seemed in great discomfort.

On the evening of November 18th (the sixth day), her temperature, which had been nearly normal all day, rapidly went up to 104°F ., when an intra-uterine douche was again used. During the night a uterine douche was used every four or six hours, but the temperature remained from 104°F . to 105°F ., and the pulse ranged from 124 to 130. Each time the douche was used a small quantity of foetid discharge was washed away. An iodoform suppository was gently pushed into the uterus several times after the douche, and on one or two occasions I swabbed the interior of the uterus with Churchill's tincture of iodine. The next morning, November 19th (the seventh day), the temperature still registered 104°F ., pulse 130; her distress and sense of impending danger very great, and for the first time there was some abdominal tenderness. After consulting with my partner, Dr. T. K. Holmes, we determined to use the cold bath. The bath tub used is one designed by the janitor of our public General Hospital. It has a perforated false bottom, which, by means of a crank, can be lowered or elevated at will. It also has a shelf which can be extended to the edge of the bed or pushed under the bed clothes. It is a very easy matter, the shelf being extended, the false bottom elevated to the top of the tub, to slide the patient on to the bath and slowly and quietly lower her into the water. The temperature of the water used was 75°F ., and she remained in the bath for fifteen minutes, when her temperature fell to 101°F . After the sense of cold and shivering incident upon the immersion passed away, she expressed herself as feeling much relieved, complained of less pain, the tenderness left the abdomen, and her intellect seemed clearer. Besides the reduction of temperature, the pulse fell from 138 to 120, and she soon fell into a peaceful sleep. The temperature fluctuated during the day between $100\frac{2}{5}^{\circ}$ and $102\frac{2}{5}^{\circ}$, running up suddenly at 8 o'clock in the evening to $104\frac{2}{5}^{\circ}$, when the nurse again gave her a fifteen-minute bath, which had the same desirable effect as the first immersion.

During the two following days, Nov. 20th and 21st (the eighth and ninth days) an intra-uterine douche was given every six hours. I substituted for the 1 to 4000 or 6000 corrosive sublimate solution, which I used at first, a 2 per cent. carbolic acid lotion, fearing some ill effect from the mercurial solution if I persisted in its use. With every douche a small quantity of slightly foetid discharge was expelled. The uterus was freely movable, without any pain or discomfort, and I could easily satisfy myself that it was becoming smaller. Once or twice I used Goodell's dilator, in order to allow of the easy passage of the glass irrigating tube and free drainage. Quinine, iron, and stimulants were given freely. Her stomach bore everything well, and only occasionally, when her temperature was high, did she vomit. There were no symptoms of peritonitis or other

secondary inflammatory processes, but the temperature still varied from 100° F. to 102° F., and the pulse from 100 to 110.

On the morning of November 22nd (the tenth day) the temperature was about normal, but during the afternoon it again rose, notwithstanding the regular use of the intra-uterine douche, to 105° F. at 4 o'clock. She was then given a twenty-minutes' bath, and at 5 o'clock her temperature was $100\frac{4}{8}^{\circ}$. It gradually rose again, and at 8 o'clock it was $104\frac{3}{8}^{\circ}$, when she was put into the bath for thirty minutes. At 9 o'clock her temperature was $99\frac{3}{8}^{\circ}$. The intra-uterine douche was persisted in, being administered every four or six hours.

The following morning at 8 o'clock the temperature was 100° F. It remained under a hundred, fluctuating for a degree or two for the next two days. The douche was continued for two days more and then stopped, the temperature remaining normal. The subsequent progress of the case was uneventful and satisfactory. She was allowed to get up on the 30th of November, and was discharged on the 8th of December.

Remarks. Before exploring the uterus, it was difficult to state whether the poisoning was due to auto- or hetero-infection, or both. From the small quantity of débris that was removed from the uterus, I concluded that it was due to the latter.

The principal indications in the treatment of puerperal septicæmia are, first, to check the absorption of any poison; and, secondly, to assist in eliminating that which has already been absorbed. Puerperal septicæmia means the presence of pyogenic organisms in the genital tract, and to combat this disease successfully they must be attacked there. This is accomplished by means of vaginal and intra-uterine anti-septic injections. The intra-uterine douches should be avoided whenever it is safe to do so, but in most cases of puerperal infection they are imperative, and their application should not be delayed too long. The chill that occasionally follows, although alarming to the patient and friends, should not cause any anxiety to the physician. It is usually followed by a sudden rise of temperature, which, however, falls as suddenly. It is well, I think, to caution the patient and friends as to the possibility of a chill coming on, which, if anticipated, will allay their apprehensions somewhat if it should occur. It may frequently be avoided by using the douche slowly and carefully, causing as little hæmorrhage as possible, and draining away all fluid from the uterus.

In other instances I have had slight convulsions follow, and on one occasion, in which Dr. Duncan was present and assisting, the patient became seriously collapsed and unconscious, with a weak, rapid, irregular pulse, and for a time her condition was quite critical, but she soon rallied and recovered without any subsequent untoward symptoms.

I do not, therefore look upon the administration of a uterine douche

as a trivial affair, but, on the other hand, as a procedure which should be carried out with great care and discrimination. In this case, notwithstanding the curetting, the careful and assiduous use of the uterine douche, and the use of the ordinary means to conserve the energy of the vital processes and assist in getting rid of the absorbed poison, my patient's condition was not improving, was apparently becoming worse, and was certainly quite serious. Some authorities recommend phenacetine and the other coal-tar preparations in persisting fever of puerperal origin, but my own experience and observations with them has been very unsatisfactory and delusive, and I have long since discarded their use in infectious fevers of any duration. Some leading authors condemn their use very strongly. Dr. Hale White,* who opened an interesting discussion on pyrexia at the last annual meeting of the British Medical Association, stated "that the practice of giving acetanilid and its allied preparations for hyperpyrexia and ordinary cases of pyrexia is pernicious and unscientific." Dr. Barr, who followed in the same discussion, stated "that while these antipyretics diminish the production of heat and increase its dissipation, they have no effect whatever on the fever poison, except to permit it to work its ravages under conditions of lowered vitality. Their use in the continued fevers is about as rational as it would be to quiet a patient from delirium tremens by knocking him down with a blow on the head."

Broadbent,† in the last Cavendish lecture, states "that in typhoid fever they have done positive harm; they not only knock down the temperature, but the patient also, sometimes fatally." Besides, it has been shown by Roque and Weil ‡ that, without preventing the formation of toxins in the system, they arrest their elimination in the urine.

On the other hand, I have never observed anything but benefit follow the use of cold sponging or the cold bath in typhoid fever, pneumonia, scarlet fever, or other infectious fever.

Dr. T. K. Holmes, at the International Medical Congress at Philadelphia in 1876, read a paper on eclampsia in children accompanied with fever, and advocated the use of the cold bath. Both before and since he has persistently practised, taught, and advocated the benefit of the application of cold water to the surface of the body in hyperpyrexia and ordinary pyrexia of typhoid fever, pneumonia, acute bronchitis of children, scarlet fever, and other infectious fevers, and it must be gratifying to him to know that the profession is looking upon the procedure yearly with more and more favor.

The statistics of Brand, who systematized the bath treatment of typhoid fever, are well known, reducing the mortality from 25 per cent. to

* *British Medical Journal*, November 17, 1894.

† *Lancet*, Aug. 24, 1894.

‡ *Revue de Médecine*, Sept

9 per cent. Prof. Osler, of the Johns Hopkins Hospital, has thoroughly carried out the Brand system, reducing the mortality in his last eighty published cases to 6.5 per cent.* Dr. Broadbent, one of the most conservative of English physicians has recently † stated that the most efficacious means of controlling the heat of fever is the application of water to the surface of the body, and when the bath treatment has been systematically tried the mortality of typhoid fever has been considerably reduced.

Hale White‡ thinks that cold sponging or the cold bath should not be regarded simply as an antipyretic, but as acting, possibly by aiding the excretion of toxines, as a direct specific in fever, which would explain the fact that not only the temperature is lowered, but the patient's whole condition is improved, and the liability to complications diminished. Besides the increasing of urine toxicity—which is diminished in fever—to normal or double the normal, the experiments of Winternitz, which have been verified to a certain extent by Thayer, of Baltimore,§ show that the number of phagocytes is much increased, in some instances doubled, after a bath. He believes that this increased number of phagocytes exerts a destructive influence upon micro-organisms which have obtained entrance into the circulation, which may account in some degree for the beneficial influence of cold in the treatment of various infectious diseases.

Dr. T. K. Holmes|| has published a case of scarlatina following pregnancy, in which the temperature on the fourth day after confinement was 106° F., pulse 160, the patient semi-comatose and breathing stertorously, in which the application of cold had a most remarkable effect, and eventually saving the patient's life when her condition seemed almost hopeless. It was the remembrance of this patient that suggested to my mind the somewhat radical measure of the cold bath in the case just recorded, one of the most stubborn I have ever had to contend with, and which had such a salutary influence and apparently quite altered the aspect and prognosis of the case.

I do not wish it to be understood that I would advocate the use of the cold bath in every case of puerperal septicæmia, or that our chief efforts should not be directed to the cause of the pyrexia in the genital tract. Each case must be treated on its merits; but when septicæmia exists, and treatment directed towards preventing the absorption of the pyogenic organisms fails to lessen the temperature and allay alarming symptoms, we have in the cold bath or cold sponging in puerperal septicæmia, as in other infectious fevers, a valuable aid, not only in relieving distressing symptoms, but in restoring our patient to health.

* *British Medical Journal*, Nov. 17, 1894.

† *Lancet*, Aug. 15, 1894.

‡ *British Medical Journal*, November, 1894.

§ *Johns Hopkins Hospital Bulletin*, April, 1893.

|| *Ontario Medical Journal*, November, 1893.

APPENDIX VERMIFORMIS.*

By J. CAVEN, M.D., AND W. BARNHART, M.D.,
TORONTO.

OUR object in this short paper is to draw the society's attention to certain points connected with the anatomy and pathology of the appendix vermiformis, and thereby to elicit discussion which may be of practical benefit to all of us. We propose at some future date to return to the subject, when our personal observations are more numerous than now; meantime, we may say that whilst we have made free use of all literature accessible to us that seemed of value, yet we profess to have based these notes chiefly on personal observation of a considerable number of cases.

Perhaps we cannot do better than begin with the description of the normal appendix given by Gray in his text-book on anatomy—a well-recognized authority: "Attached to the lower and back part of the cæcum is the appendix vermiformis, a long, narrow, worm-shaped tube, the rudiment of the lengthened cæcum found in all the mammalia except some of the higher apes and the wombat, in whom an appendix exists. The appendix varies from three to six inches in length, its average diameter being about equal to that of a goose quill. It is usually directed upwards and inwards behind the cæcum, coiled upon itself, and terminates in a blunt point; being retained in its position by a fold of peritoneum which sometimes forms a mesentery for it. Its canal is small, and communicates with the cæcum by an orifice, which is sometimes guarded with an incomplete valve. Its coats are thick, and its mucosa furnished with a large number of solitary glands."

From reading the above one would hardly infer that this little organ varied so greatly in position, length, and relations generally, as investigation shows that it does. There is no structure of the body that one can be less certain of finding "at home" than the appendix. Let us refer to another authority, Clado, whose work is recent and exhaustive. Clado states that the appendix is kept in place by two folds of peritoneum. These are (*a*) a meso-appendix attached to the iliac fossa, and (*b*) a fold perpendicular to the first, and attached to the posterior part of the ileum.

*Read before the Toronto Pathological Society.

In a general way this is correct, so far as we have seen, but there is a considerable variation with regard to length, position, and attachments of these folds. Rolleston says that the mesentery of the appendix usually extends only along about *one-half* the length of the tube. Our experience is quite different. So far as we have seen, it runs nearly, or quite, to the tip in all cases. Kelynack agrees with this. Its shape is commonly triangular, but occasionally it forms a narrow band of even width from end to end. Gray's statement, as quoted above, is that a mesentery is *sometimes* present; we have *always* found it. In females, a double fold of peritoneum runs from the root of the appendix to the ovarian ligament. This fold might easily direct pus forming around the appendix into the broad ligament, and so give rise to difficulty in diagnosis. We have also found a corresponding fold from the colon on the left side.

Clado speaks of a lymph gland as lying between the ileum and appendix. It is difficult to demonstrate when undiseased. In tuberculosis, however, it, when affected, stands out prominently. The lymphatics of the appendix empty into it.

The peritoneum, together with the colon, ileum, cæcum, and appendix, form a series of so-called pouches or fossæ, which vary in number in different cases; being in one case easily demonstrable, in another not to be made out as pouches. These are, according to Rolleston, ileo-colic in the angle formed by junction of ileum with colon; ileo-cæcal superior and ileo-cæcal inferior, formed by junction of ileum and cæcum together with the mesentery of the appendix; sub-cæcal, running upwards behind the cæcum. Anatomically, these pouches are supposed to be important, since they afford an opportunity for hernia of the appendix into their cavities. Rolleston presents a drawing, showing these pouches and their relations. In our experience they have been so often wanting, or of so little depth, that we cannot profess to consider them as of great consequence. Kelynack speaks of a pouch as occurring sometimes on the right side of the cæcum, and says that the appendix may lodge in it. The relationship of the appendix vermiformis with the long cæcum of some forms is much better seen in the human *fœtus* than in the *adult*. The adult position of junction is distinctly behind the cæcum, whereas in the *fœtus* it is distinctly subcæcal and terminal. This terminal position is found in quite a percentage of cases in the adult, the cause of its persistence being unknown. Its great length in these cases is noteworthy. In speaking of variations of position, nothing further will be said of this position.

Variations of position. Variations in position of the appendix are very common, and may be of two quite distinct varieties (Kelynack). They may be (a) Normal variations, *i.e.*, not due to disease; (b) abnormal variations, *i.e.*, due to disease.

Normal variations. These are numerous, and so common as to make one hesitate in pronouncing absolutely, without a very large collection of cases, as to which is *the* position.

(1) Appendix hangs straight down over the pelvic brim ; quite free ; appendix usually long and mesentery narrow. This is a common position.

(2) Appendix lies behind cæcum, and turns up and inward towards the median line ; the tip either hangs down or "returns," according to length and attachment of mesentery ; mesentery may be attached to post wall through the whole length, or only through part of its length. Many accept this as the normal position.

(3) Appendix turns out to right side, and runs up behind or to outer side of cæcum and colon. It may reach the under surface of the liver ; in one case recorded by MacCallum, of London, its tip adhered to the diaphragm, and an abscess forming in it between liver and diaphragm opened through the latter, and was evacuated by way of the air passages. We have found one case seven and a half inches long in which the under surface of the liver was reached.

(4) Appendix hangs below the cæcum, and is turned either in or out ; coiled or bent at the acute angle ; not hanging over the pelvic brim.

(5) Appendix runs directly across the sacrum (Kelyack).

(6) Appendix runs upwards and inwards towards the median line, but is covered over by a short length of ileum, with its mesentery. In these cases the last four or six inches of the ileum are held down to the pelvic brim by a fold of peritoneum, and thus its mobility is lost, and a very definite pouch formed. We have seen this condition but twice, and both times in the last twelve post-mortems.

(7) Appendix lies in one of the pericæcal pouches.

Abnormal variations. Such variations are due nearly always to peritonitis, and Kelyack thinks that ante-natal peritonitis should be taken into account, as well as post-natal.

(1) Appendix adheres to cæcum, or cæcum and colon. The adhesion may be throughout its whole length or partial. R. F. Morris speaks of a case in which the tip only became adherent, and ulceration occurred into the cæcum, thus establishing a loop.

(2) Appendix adheres to ileum.

(3) Appendix adheres to rectum.

(4) Appendix adheres to bladder, uterus, or ovary. We have met with one case in which the ovary and appendix were adherent as a result of septic metritis with peritonitis. The affection of the appendix was so marked as to raise the question of the seat of origin of the trouble. Was the appendix the cause of peritonitis, or peritonitis the cause of appendicitis ?

- (5) Appendix adheres to iliac fossa.
- (6) Appendix adheres to omentum.
- (7) Appendix adheres to the anterior abdominal wall.

(8) Occasionally the cæcum and appendix are found high up in the cavity lying over the kidneys, or just below the liver. Rolleston thinks this to be a *developmental* fault, the cæcum having not descended from its foetal position. Kelynack, on the other hand, favors the idea of an *early peritonitis* anchoring it, as it were. In the early foetal position the appendix lies to the right or outer side of the cæcum, and is dragged into its normal adult position by the descending cæcum and ileum, a rotation of the large gut occurring as it descends. Incomplete rotation may account for those cases in which the appendix lies to the outer side of the cæcum, although no signs of disease are present (No. 3 of "Normal Variations").

The records of some writers show that in a certain number of cases the appendix is extraperitoneally placed. One gives about thirty-nine per cent. of cases as the proportion. We have not yet found what we could justly term an extraperitoneal appendix. It has always been distinctly inside the cavity.

The structure of the appendix vermiformis is grossly the same as that of the intestines, showing serous, muscular, submucous and mucous coats. The marked peculiarity is the large amount of lymphadenoid tissue present in the mucosa and beneath it. Bland Sutton compares it on this account to the tonsil, using the term "abdominal tonsil," and remarks that such tissue is always peculiarly open to infection, especially in the young. Its length varies considerably, from one-half inch to nine inches. Kelynack gives, as his average, three and one-half inches; Treves, average four inches, limits one to six inches; Fitz says his longest was "nearly six inches." Our own measurements show an average of 3.835 inches.

At the opening into the cæcum is often seen a small fold of mucosa, known as the valve of Gerlach. This is, at most, a very imperfect valve, and probably has no such function.

A perfect lumen is generally seen in the appendix, varying considerably in diameter in different cases, and modified greatly by circumstances, *e.g.*, cicatrization, at one point giving rise to dilatation, at another, etc. Rolleston found one hundred and eighty-three out of two hundred and thirteen pervious throughout; in sixteen, partial obliteration and, in four, complete obliteration. Fitz, on the other hand, says that more or less obliteration is common; we have not found it so. The seat and length of obliteration may vary greatly, and the results will vary also. A contracted outlet is thought by some to be the most dangerous change

of calibre that can occur; we cannot see why, since intra-appendical accumulation may happen, no matter where contraction may be found.

Treves makes the statement that the appendix is frequently absent. His words are: "It is quite common to find, in post-mortem subjects, that the appendix vermiformis is wanting." This is, apparently, a great exaggeration. Cases have been reported; *e.g.*, Bland Sutton reports one in a foetus. In many cases careful examination is necessary to find the organ, but we have never come across one of complete absence. Kely-nack, in a very large experience, has always been able to find it, except where disease had caused its removal. If inspection of the cæcum from the inside were also undertaken, probably absence would not be spoken of as quite common.

Contents. Normally, there is more or less mucus present when the appendix is opened. Clado says fæcal matter is *never* present in a healthy appendix, but this does not seem to us to be correct. Semi-fluid fæcal matter is not infrequently seen, with no visible changes. In forty cases we found six fæcal concretions of varying consistency, with no signs of damage.

A series of investigations has shown that the bacillus coli communis is frequently found in health; Hodenpyl found in all of five cases a pure culture. We may apparently regard it as a normal inhabitant. It is said never to be found till after birth, and not till the infant has been nursed.

Concretions. Price records sixty-three concretions found in one hundred and forty-six cases. Fitz collects three hundred and twenty-one cases of inflammation with perforation, and in these fifty per cent. had fæcal concretions and twelve per cent. foreign bodies. He believes that careful examination would show a much greater percentage of concretions. Foreign bodies, such as fruit seeds, shot, etc., are much spoken of and but very rarely seen, a mistake very commonly made being the taking of concretions, lime-impregnated or inspissated, for extraneous matter. We show you to-night a specimen of appendix containing a rare form of foreign body, viz., a pin. This is the only true foreign body we have met in our sections.

Appendicitis. The causes, both predisposing and exciting, are multiple. Morris gives, as one great predisposing cause, the fact that in the appendix we have a soft, elastic, mucous tube lying within a relatively inelastic and firm peritoneal and muscular tube; anything that induces swelling of the mucosa may seriously damage it, even causing necrosis. The position of the appendix may also have something to do with its liability; not so much its dependent position as its connection with a blind gut.

Probably in all cases germ invasion is an essential part of the process. It is commonly supposed that foreign bodies, concretions, violence (exter-

nal), constipation, etc., may act as causes ; apparently, these are but secondary aids. It has been said that pressure of concretions causes necrosis, and so excites inflammation with perforation. It is doubtful whether this is possible. There is always an acute inflammation when perforation occurs, and much greater pressure than that of a concretion may be long continued without any such result. Moreover, perforation may happen without the presence of any concretion. No doubt foreign bodies, concretions, etc., may modify tissue to such an extent as to permit of the lodgment of organisms.

Amongst the organisms most commonly found as occurring in connection with appendicitis are the tubercle bacillus, the typhoid bacillus, and the bacillus coli communis.

The germ most frequently found, both in peri-appendical and general peritoneal inflammation, is the bacillus coli communis ; *e.g.*, Hodenpyl records it as found in thirty-four out of thirty-five cases ; a streptococcus alone in one case ; bacillus pyogenes foetidus along with bacillus coli communis in one case ; streptococcus pyogenes with bacillus coli communis in one case. In ten cases the contents of the normal abdominal cavity gave no cultures ; in one, bacillus coli communis.

To secure a negative result, the examination must be made soon after death, since the non-resistant dead tissues permit the easy passage of micro-organisms through the bowel walls.

DISEASES OF THE ORAL MUCOUS MEMBRANE.*

BY E. HERBERT ADAMS, M.D., C.M., D.D.S.,
TORONTO.

THE subject is an important one, not only to dentists, but to the general public. One of Toronto's pathologists remarked to me, when he heard I was going to talk to dentists on the subject, "For goodness' sake ! tell them to keep their instruments clean ; it is simply criminal the way they jab unclean instruments from the mouth of one patient to that of another."

The modern and better class of dentist keeps his instruments clean, though rarely, perhaps, aseptic. The uncleanly ones are, however, too common, and, more than that, few dentists can tell the mucous patch of syphilis from an ordinary ulcer. From what I can learn, there has never yet been a clinical demonstration of syphilis of the mouth exhibited to the students in the Dental College in Toronto. My opinion is that dentists should be more practically educated in reference to the diseases of the mouth, so that, in all cases where there is a possibility of contagion, they will not only have their instruments properly cleansed, but also rendered thoroughly aseptic.

The ordinary medical practitioner, too, is all too ignorant frequently of oral diseases, and if dentists were better educated in this respect they would be often invaluable in consultation with their medical confrères, and especially in the country.

The mouth serves as a breeding place for the specific germs of many diseases. Among these are diphtheria, syphilis, tuberculosis, pneumonia, and typhus.

Diphtheria bacilli have been found in the saliva of healthy people, thus proving that the saliva is not inimical to the life of this dread germ. Mild and even advanced cases of diphtheria, and the various forms of tonsillitis, are not infrequently found in patients occupying the dentist's chair.

The pneumonia coccus is also found in the mouths of healthy people, while a primary tuberculosis of the mouth seems to indicate that the tubercle bacillus occasionally finds a favorable abode in the fluids of the mouth.

*Read before the Toronto Dental Society.

The mouths of consumptives, too, who are expectorating much, are peculiarly prone to contain immense numbers of these germs, and dental instruments may easily be the means of transferring the germs to the mouths of healthy persons.

Microscopical examinations which I have made from the sputa which has adhered to the teeth in consumptive patients has demonstrated the presence of thousands, and in one case millions, of tubercle bacilli.

In regard to syphilis, leaving out sexual intercourse, the great majority of infections from this disease take place from the oral cavity. The oral fluids seem not only to be non-destructive to the syphilitic germs, but to serve as carriers of the poison.

Many cases are recorded of syphilis being transmitted by dental instruments. L. Duncan Bulkley (on "The Dangers arising from Syphilis in the Practice of Dentistry") has enumerated many such cases. Dalles, Otis, Lancereaux, Giovanni, and others have recorded cases where chancre of the lip occurred two or three weeks after dental operations. Lydston, Roddick, and Parker have recorded cases of syphilis following tooth extraction.

Dentists themselves have been inoculated by scratching their fingers on a patient's tooth. Bulkley relates thirty cases where syphilis was caused by tooth-wounds, by bites and blows on the teeth. Veritable epidemics have occurred by infection with saliva of syphilitic patients. In several cases recorded a large number of persons have been inoculated by tattooing, the instrument used having been moistened with the saliva of a syphilitic person.

In view of these facts, it is of the utmost importance that dentists should exercise greater cleanliness in their instruments, and should be more practically experienced in reference to the manifestations of disease in the human mouth.

Indeed, so important did the subject seem that a few years ago the Stomatological Club* of Buffalo was formed. It is a society composed of dentists and physicians, organized specially for studying the pathology of the oral cavity, comparative dental anatomy, oral bacteriology, and kindred subjects. Dr. W. C. Barrett was its first president.

And, now, let us consider some of the more common diseases of the oral mucous membrane :

Stomatitis, inflammation of the mouth, is due to mechanical, chemical, and bacterial causes. As mechanical causes are the sharp edges of broken and carious teeth, and ill-fitting dentures, etc., chemical irritation may come from high-spiced foods, alcoholics, tobacco-chewing, and excessive smoking, or from acids or alkalies, etc., taken into the mouth. Mercurial

**Dental Cosmos*, 1891, page 303.

stomatitis may occur from the use or abuse of mercury in medicine. Infection of various kinds plays an important part. There is usually redness, swelling, and increased secretion. Here and there little vesicles appear, which burst and leave superficial ulcers. It may be acute or chronic.

The treatment is absolute cleanliness of mouth, etc. Listerine, one in four, one or two teaspoonfuls of a 1 per cent. solution of permanganate of potash to a glass of water, a 2 per cent. solution of chlorate of potash, or a 1 or 2 per cent. solution of carbolic acid, are useful mouth washes.

If there are superficial ulcers, they are touched with strong carbolic or lunar caustic. In this way healing will be aided.

Ulcerative stomatitis, as the name signifies, is a disease of the oral mucous membrane, with superficial necrosis, and the consequent formation of ulcers. The disease is frequently epidemic in jails and other public institutions.

The disease usually attacks the gums of the lower jaw first, gradually spreading thence to neighboring portions of the lips and cheeks. The tongue and palate are generally not much affected, though often the seat of a simple catarrhal inflammation. The gums are swollen, spongy, and red, and bleed easily. The breath is very offensive. It is very difficult to take nourishment. There may be marked constitutional symptoms. There may be moderate elevations of temperature, particularly in children. If not treated, disease sometimes becomes chronic.

The treatment is similar to simple stomatitis, and consists of antiseptic mouth washes, etc. It is important to administer laxatives if necessary, and to keep the stomach in good, healthy condition. Brilliant results can be often obtained by judicious treatment.

Aphthæ, or Aphthous stomatitis, is a name given by physicians to several distinct things. Many doctors and dentists call every disease aphthæ in which there are white spots on the buccal mucous membrane. It is thus frequently confounded with thrush.

The genuine aphthæ are roundish spots upon the mucous membrane, grayish white, and of small size, unless made larger by the confluence of several into one another. They usually have a narrow red areola, and are most numerous on the edges and dorsum of the tongue, and on the frænum, but they also occur on the lips and cheeks. In addition to the genuine aphthæ, there are almost always the signs of a common stomatitis.

The disease occurs chiefly in children, and at the time of the first dentition. The disease is not rare in adults. Many individuals seem especially liable to it, and very frequently have little white, and often very painful, spots here and there on the tongue, or elsewhere in the mouth.

The treatment is antiseptic washes and local application to the ulcers

of carbolic acid, nitrate of silver, or nitric acid. Care should be taken in making strong applications only to touch the diseased part.

Thrush is a disease principally of children, and is produced by a bud-fungus, the *saccharomyces albicans*. In adults it occurs, with rare exceptions, only after exhausting diseases.

The infection is caused by inhalation of germs from the air, or more commonly by contact with affected objects. Uncleanly sucking bottles afford an excellent medium for the development of bud-fungi, which are rather widely distributed. The growth of the fungus is, as a rule, restricted to the mucous membrane.

In an acute case of thrush the mouth is hot, and the patient feverish. The inflamed surface presents numerous characteristic whitish patches, which often coalesce. If the growth is abundant, it is easy to scrape off the upper layers, and make the diagnosis by aid of a microscope.

The treatment is chiefly prophylactic—good air, food and cleanliness in nursing, and in mouth and feeding bottle.

The bud-fungi do not flourish in an alkaline media, and wiping the mouth in a cloth dipped in an 8 or 10 per cent. solution of bicarbonate of soda is all that is necessary in mild cases. A solution of borax 1 in 30 is also good. Honey should not be added to the borax, as is often unwisely done.

Acute glossitis, or inflammation of the tongue, is generally due to the sting of a bee or a wasp, or a severe burn or cauterization. A severe case in my own practice occurred this summer. A boy was eating bread and jam, and in doing so a wasp, which was also indulging in the jam, was taken into the mouth. A severe sting in the tongue resulted. In a few minutes the tongue was enormously swollen, and protruded from the mouth; the entire cavity of the mouth was filled with the swollen mass. The pain, too, was intense, and much anxiety was entertained by his father lest the larynx should also become swollen, and fatal dyspnoea result. A 5 per cent. solution of cocaine immediately relieved the pain, and sucking of ice soon lessened the swelling.

Mucous patches in the mouth are an affection belonging to secondary syphilis. They occur generally during the middle and later period of secondary syphilis, but may occur at any time during the secondary stage. They may even occur very early, associated with the affection of the throat and other parts of the interior of the mouth, with the first outbreak of the eruption, and with the falling out of the hair.

Mucous patches are usually multiple, and generally accompanied by other signs of secondary syphilis. Occasionally, however, a single patch occurs on the border of the tongue, and for the time, at least, no other sign of syphilis is present. They may occur on the mucous membrane of

the lips, cheek, palate, tongue, and tonsils. On the tongue they may form on any part, on the dorsum, borders, tip, or under aspect ; but they occur more frequently on the border than elsewhere. They may be met with at any age, for they belong to the congenital as well as to the acquired syphilis ; but they are more often seen on the tongues of young adults than at any other period of life. They may be found in both sexes, but are more often observed in men than in women.

The appearance of mucous patches varies greatly. The typical mucous patch is generally rounded or oval in form, and without irregular edges. They are, however, often modified much by external irritants or rubbing against the teeth. It is sharply defined, and is generally grayish white in color. Immediately beyond the border of the patch the tissues are quite natural ; there is no redness or swelling unless there is accidental inflammation. Occasionally the patches under the tip of the tongue, and in places where they are little disturbed or irritated, are warty in appearance, of a dead white color, and slightly elevated.

The patches usually begin as a small, slightly raised, white gray spot, and, as it causes no pain, is often unnoticed for some time. Several small patches may coalesce, and thus form a large, irregular patch. If untreated, they may last months, with little apparent change. The *diagnosis* is comparatively easy. To those who have seen them, the patches themselves are characteristic. In doubtful cases, the accompanying signs of syphilis are important. They may be mistaken for aphthous stomatitis, cucomata or wandering rash.

In aphthæ and mucous patches there are white patches, but the white patches of aphthæ belong almost exclusively to children, or to adults suffering from severe illness, while the white patches of syphilis occur almost exclusively in adults who are in good, or, at least, not in bad, health. The white patches of aphthæ are surrounded by bright red areolæ ; those of syphilis are peculiarly free from any sign of surrounding inflammation, unless they have been irritated, or are accidentally inflamed. Aphthous ulcers are acute, mucous patches are chronic. The presence of other secondary signs of syphilis are, of course, a crucial test.

Under the heading of leucoma, leukoplakia, psoriasis, ichthyosis, tylosis, keratosis, plaques, opalines, are understood white and bluish white patches and plaques, affecting for the most part the tongue. These may be generally called under the one head *leucoma*, meaning a whiteness or white opacity of the surface of the tongue. The *smoker's patch* belongs to the same class of disease, and is probably only an early stage of these affections.

The diagnosis of mucous patch from leucoma depends partly on the difference in the color of the patches, which are not pearly like leucomatous patches, but grayish white, as if they had been painted over with a

nitrate of silver stick. Mucous patches occur more often on the borders, leucoma patches on the dorsum of the tongue; mucous patches are much more often deeply ulcerated than leucoma patches. Leucomas, when thick and white and raised, and, therefore, more likely to be taken for mucous patches, are, as a rule, much harder and drier than mucous patches. Leucoma usually runs a very chronic course; mucous patch a fairly acute course.

The treatment of mucous patches is local and general. The general treatment is principally mercury, in the form best adapted to the patient, together with hygienic treatment.

The local treatment is often brilliant in its results, and a ten-grain solution of chromic acid is perhaps as productive of as good results as anything. At the same time, all sources of irritation in the mouth, such as a carious tooth, etc., should be removed. Three grains of hydrargyrum cum creta twice a day is a good form for internal treatment.

Tertiary syphilitic plaques are comparatively rare, and have been little described, but are supposed to be the cause of the deep fissures and furrows one sees in old disfigured tongues, following tertiary syphilis. The diagnosis is easy, especially as there are usually other signs of syphilis. The treatment is iodide of potash, 5 or 10 grains three times a day.

Now, what are the practical deductions to be taken from the suggestions made in this paper?

Dentists should be exceedingly careful about thorough cleanliness in their instruments, and especially forceps.

In all doubtful cases of oral disease they should refuse to perform dental operations until the mucous membrane is free from disease; or, if operation, such as extraction, is urgent and necessary, the forceps should be carefully rendered aseptic by a 1 in 20 solution of carbolic acid after operation.

If there is a doubt about the diagnosis in oral disease, a physician should be called in consultation, or the case referred entirely to a physician for treatment. My opinion, however, is that the average dentist is just as capable—or should be just as capable, if not more so—of treating lesions of the oral mucous membrane as the average physician; but, as a physician, you will excuse me objecting strenuously against dentists treating such cases without charging a fee when the patient can afford it. If the dentist writes a prescription, he should charge for it the same as a physician, and they lose in dignity and in professional standing with the medical fraternity by not doing so.

More attention should be given in our dental colleges to practical clinical instruction for our students in the diseases of the mouth.

There is an immense class of suitable clinical material available, and it is not very flattering to our college management that it has not been more largely utilized.

LODGMET OF A FOREIGN BODY—A PIN—IN THE APPEN-
DIX VERMIFORMIS: DEATH FROM
PYÆMIA.

BY A. MCPHEDRAN, M.D., AND J. CAVEN, M.D.,
TORONTO.

WE offer no excuse for recording the following case. Its rarity and interest seem to call for its preservation.

J.H., æt. 21, a laborer doing light work about a foundry. Was always well until November 15th, 1893, when he was seized with severe pain in the seventh intercostal space of the right side, in the nipple line, and extending backwards. He entered Toronto General Hospital on November 17th, and his condition, when first seen, was as follows: Temperature, 103° F.; there was tenderness over the seat of pain above spoken of; breathing was costal, and abdominal muscles tense. There was pain in the abdomen at three points—in the right iliac fossa, above the umbilicus, and to the left and below the umbilicus. These points were tender, especially that in the cæcal region. The abdominal pain disappeared in three or four days. On the afternoon of the 18th he had a chill, and almost daily, from that time on, for six weeks, the temperature rising sometimes to 106.40 F. Two days after admission, signs of pleurisy appeared at the seat of pain, below the nipple, and spread gradually to the fourth rib in front, being lower behind. The lower border of the liver extended nearly an inch below the costal margin. The pleura was aspirated on two different occasions, but no pus was obtained.

In December the right ankle became swollen, and some thin pus was obtained by aspiration.

During January there was little change; the temperature, however, ran a lower range, with only occasional chills. Signs of pleural exudation diminished posteriorly on the right side, and slight effusion occurred on the left.

On February 12th he coughed up six fluid ounces of offensive pus, and, after this, the temperature was slightly subnormal for a few days; urine normal, and no jaundice.

The patient continued to fail, the temperature becoming irregular.

Diarrhoea now became troublesome, and pus appeared in the urine. Death took place on March 10th, 1894.

During life the blood was examined microscopically, but no organisms of any kind could be detected.

Autopsy. The autopsy was made upon March 11th, eighteen hours after death.

Section showed a small, firm-walled abscess in the liver substance, just beneath the surface of the convexity of the right lobe; over this abscess the diaphragm and liver were firmly adherent. In the right pleura was a small pus cavity communicating, by an opening through the diaphragm, with the above-mentioned liver abscess.

The upper part of the pleural collection communicated with a bronchus in the lower border of the upper lobe of the right lung. In the liver were found several more recent abscesses, with soft, ragged walls and a very perfect reticulum of vital and necrotic tissue subdividing the larger cavities. The left pleura contained a few fluid ounces of serum, and the lobes of the left lung were adherent. Both lungs showed marked collapse.

The appendix vermiformis was the seat of old inflammation and its walls considerably thickened, the tube, as a whole, being much dilated. About its middle was a distinct cicatricial contraction, and in the dilated extremity beyond the contraction lay a large-sized common pin. The pin was bent at an obtuse angle, and its tip embedded in the appendical wall for about one-eighth of an inch. The pin is largely covered with a layer of calcareous matter laid down in a regular coat. No macroscopic recent damage to the appendix was visible; no signs of recent inflammation. The other organs exhibited nothing specially noteworthy.

This case is one of great interest for more than one reason. The finding of a foreign body in the appendix is, in our experience, a very great rarity. We have had many opportunities of examining the appendix, and never before found an undoubted foreign body.

Of course we are aware that the statement is commonly made that bodies of such a nature as date stones, grape seeds, cherry stones, apple pips, shot, and so on, are prone to make their way into the appendix. This we cannot accept. In a considerable series of cases of appendicitis with perforation, Fitz found records of the presence of foreign bodies in twelve per cent., but does not state what they were. One great difficulty in the way of free acceptance of such statistics lies in the fact that close inspection or analysis of supposed foreign bodies has, time and again, shown that lime impregnated fæcal concretions may be of a variety of different shapes, and that, as a matter of fact, they do simulate, for example, seeds of various kinds. The most frequently reported forms of

foreign bodies are just those seeds and pips that are so readily simulated. Another circumstance that seems to us to tell against the foreign body idea lies in the fact that, whilst gallstones of small size must be quite common in the cæcum, it is but seldom, if records be correct, that they are found in the appendix. Worms also are common intestinal inhabitants, and we have been able to find but three references to them as discovered in the appendix.

It is not to be wondered at if cases such as the one we report are uncommon. There are many more obstacles in the way of a pin landing in the appendix than of almost any other form of foreign body, in addition to the fact that only comparatively infrequently are these convenient little articles swallowed. The cases of which we have found records are five in number, and of these one only agrees with our case in its results and terminations.

Mestivier records a case in 1759 in the *Paris Journal of Med., Chir. and Phar.*, in which an abscess in the region of the umbilicus was traced to a large pin in the appendix. Joffroy has a case, terminating in general peritonitis and death, in the *Bull. of the Anat. Soc. of Paris*, 1869. In 1875 Legg, of St. Bart.'s Hospital, London, recorded a case in the hospital reports for that year, and in 1879 Ashby's case was noted in the *London Lancet*. The latest record is that of Bell, of Montreal, in the *Canada Medical Record* of November, 1894.

Apparently in Legg's case some doubt existed as to whether the foreign body were really a pin or not, since after the word pin in the record a question mark stands.

Ashby's case agrees with ours not only in the lodgment of the pin within the appendix, but in the resulting pyæmia with liver infection, no statement of local affection being made.

Other instances of pyæmia with liver abscess, due to ulceration of the appendix, are found on record ; one by Traube in the *Deutsche Klinik* for 1859 ; one by Pearson in the "Transactions of the Medical Society of New Jersey" for 1871 ; and one by Machell, of Toronto.

Selected Articles.

HYPNOTISM IN ITS RELATIONS TO CRIMINAL JURISPRUDENCE.

BY THOMSON JAY HUDSON,

WASHINGTON, D.C.,

Attorney at Law ; Author of "The Law of Psychic Phenomena" ; "Hypnotism a Universal Anæsthetic in Surgery," etc.

I HAVE been asked to pass a scientific opinion on the question whether hypnotism can be successfully employed to induce the commission of crime, and a legal opinion concerning the status of hypnotism in criminal jurisprudence. There are perhaps no two questions of more vital interest or imminent importance than these. When a confessed murderer is acquitted on the plea that he was hypnotized and compelled to commit the crime, a question is presented which is in some respects cognate to the old problem of emotional insanity. It is, however, of infinitely greater importance than the latter, for the obvious reason that emotional insanity could be made available as a defence only when it could be clearly shown that the victim had so grossly invaded the private rights of the accused as to deserve his punishment, whereas the defence which consists wholly of the allegation that some third person compelled the commission of the crime by means of hypnotism is equally open to the avenger of a grievous wrong and the coldest-blooded murderer that ever scuttled a ship or cut a throat. It is obvious that if such a defence is once admitted as an element of criminal jurisprudence, a very wide and a hitherto unexplored avenue of escape is opened to the criminal classes. Nevertheless, when a criminal is acquitted on such grounds it may be said in extenuation that the jury entertained a "reasonable doubt," or invoked the old common-law maxim that "it were better that ninety-nine guilty men should escape than that one innocent man should be put to death." But when a confessed murderer is not only acquitted of the crime, but the alleged hypnotist is convicted of murder in the first degree on the testimony alone of said murderer, the question assumes a far more serious aspect. If such a

thing can happen, no man is safe who incurs the enmity of one of the criminal classes. As the books say of the charge of rape, "It is an accusation easy to make, but difficult to disprove." In the present state of popular opinion on the subject of hypnotism, it is a charge impossible of refutation. The popular belief on the subject may be summed up in two sentences:

(1) It is the popular belief that a person may be hypnotized at a distance and against his will.

(2) It is also believed that in the hypnotic state a person is under the absolute dominion of the will of the hypnotist, and can be compelled to perform any act, however repugnant to his feelings or his conscience.

Obviously, if these two propositions are true, hypnotism has a legitimate place in criminal jurisprudence. The scientists, however, who hold that hypnotism can be employed for criminal purposes do not all agree as to the truth of the first proposition, but they sustain the second with practical unanimity. It is to this second proposition, therefore, that we must first direct our attention, for if that is found to be untrue it is unimportant whether the first is true or false.

It must be premised that the science of hypnotism is yet in its infancy. No man can safely predict its future, as to either its uses or its abuses. That it is useful when legitimately employed no one who is acquainted with the facts will deny. That it may be employed to the detriment of its votaries is a proposition that is equally true of everything in Nature. That when its laws are understood they will be found to be promotive of the highest good of the human race is a proposition sanctioned by every discovery yet made in the domain of Nature's laws.

Little as is known of the ultimate possibilities of hypnotism, there are some things about it that have been definitely ascertained, and are, broadly speaking, as well known now as they can ever be known. It is not necessary for one to be able to calculate the eclipses to enable him to know that the earth is round, or to grasp the fundamental hypothesis of gravitation. Nor is it necessary for us to know the future possibilities of hypnotism to enable us to grasp its fundamental laws, since they have been definitely formulated.

Broadly speaking, we know what hypnotism is, and we know at least one of its fundamental laws. The researches of the European scientists have definitely settled that much, and for the purposes of our present inquiry it is sufficient.

The word "hypnotism" is derived from the Greek *upnos*, signifying "sleep." Dr. Braid, who was the originator of the term, defined it as "nervous sleep," or induced sleep.* This implied the theory, then

* *Neurypnology*, p. 13.

prevalent, that a subject must be asleep in order to exhibit the phenomena of hypnotism. Professor Liébault, of Nancy, extended the researches of Braid, and immortalized his own name by the discovery of the law of "suggestion." Professor Bernheim, a pupil of Liébault's, in conjunction with the latter, discovered that the Braidian definition was too limited in its scope to embrace all the phenomena, inasmuch as it was found that many of the distinctive results could be produced while the subject was in what Bernheim terms the "waking condition." Bernheim, therefore, defines hypnotism as "the induction of a peculiar psychical condition, which increases the susceptibility to suggestion."† This implies the theory that persons are normally susceptible to "suggestion." This conclusion, however, does not seem to be warranted, except in the sense that all are subject to the influence of others. There must be some abeyance of the objective faculties in order to produce the phenomena of suggestibility in the hypnotic sense—that is, in the sense that a suggestion can produce an hallucination. My definition of hypnotism would, therefore, substitute the word *induces* for "increases" in Bernheim's definition.

As before remarked, Professor Liébault discovered and formulated the law of suggestion. That law is now almost universally recognized by scientists throughout the civilized world as *the* potent factor in hypnotism. I say "almost," for there are still a few exceptions, consisting of a constantly diminishing number of the followers of the late Professor Charcot, who believed that hypnosis could be induced only in hysterical patients. There is one other French "scientist" who succeeds in astonishing himself and amusing the scientific world by the production of phenomena which demonstrate nothing but his own ignorance of the principle of suggestion. Then there is one English author who recently produced a universal guffaw in the scientific world by publishing an *exposé* of the Frenchman, and succeeded in astonishing all Europe and America by demonstrating the fact that he knew less about the subject than the Frenchman himself. With these unimportant exceptions the law of suggestion is universally recognized among scientists.

Formally stated, the law is this:

Persons in an hypnotic state are constantly amenable to control by suggestion.

Broadly speaking, suggestion, as the term is employed in hypnotic science, is a statement (true or false) made to an hypnotic subject. Its potency resides in the fact that the hypnotized subject unhesitatingly accepts the statement or suggestion as true, and acts accordingly. Thus, an hypnotic subject may be made to believe that he is another person, or that he is an animal, or a demon, or an angel, and he will assume the

† Suggestive Therapeutics, p. 15.

character and act the part to the life, within the limits of his physical or mental capacity. He may be made to get drunk on water by suggesting to him that it is brandy; and he may then be made sober by giving him brandy, accompanied by the suggestion that it is an antidote to the previous "stimulant."

These are the fundamental facts of hypnotism as they are recognized by the public. And it is upon these facts, thus broadly stated and superficially understood, that the conclusion has been based that hypnotism can be employed as an agent of the criminal. It is, perhaps, a natural conclusion for one who has witnessed only the common platform experiments. He sees the subject thrown into a state that is to him mysterious and inexplicable. He sees the subject in that condition become apparently under the absolute control of the operator, and dominated by the most absurd suggestions. His natural conclusion is that, if the operator chose to suggest to the subject that it was necessary for him to perpetrate a crime, he would be compelled to do so in obedience to the law of suggestion. This is the first conclusion at which the European scientists arrived. But they were not content with mere platform experiments and abstract deductions. So they instituted a series of laboratory experiments, in which criminal suggestions constituted the salient feature. Subjects were hypnotized and paper daggers were placed in their hands, and the suggestion was made that it was extremely desirable that some imaginary person, or real one for that matter, should be incontinently slaughtered. It is needless to say that the suggestion was in every instance obeyed with the greatest alacrity. It is almost superfluous to add that the experimenters, who were mostly medical gentlemen, were practically unanimous in the opinion that hypnotism was a very dangerous force in the hands of anybody but doctors.

It is my purpose in this paper to show that this view of the case is to the last degree superficial, and evinces a singular lack of appreciation of the real scope and significance of the law of suggestion. In their view of the question, suggestion would be confined to the oral declaration of the hypnotist to his subject. The truth is that the suggestions of the hypnotist constitute the least important part of the suggestions that dominate the mind of the subject.

Suggestions are divided into two classes—namely: (1) Suggestions by a second person, as by a hypnotist. (2) Auto-suggestions.

The first class is again subdivided into two classes—viz.: (1) Oral suggestions. (2) Mental suggestions.

With the latter class we shall have nothing to do, as it belongs to a higher phase of psychic phenomena than we are considering.

Auto-suggestions are subdivided into four classes, viz.: (1) Volitional auto-suggestions. (2) Suggestions of moral education and fixed prin-

ciples. (3) Instinctive auto-suggestions. (4) Suggestions of the environment.

The greater part of the above divisions and subdivisions are explained by their terms. The subdivisions of auto-suggestions, however, require elucidation. Before proceeding to do so I desire to impress a very important fact upon the mind of the reader.

It often happens in the course of experiments in hypnotism that two contrary suggestions will be made at the same time. The invariable result is that great distress of mind is inflicted on the subject, and it often results in bringing him out of the hypnotic state with a severe nervous shock. Where the latter result does not follow, the stronger suggestion necessarily prevails. The importance of this fact will become obvious as we proceed.

(1) *A volitional auto-suggestion* is one which the subject makes to himself before being hypnotized. For instance, if he anticipates the possibility that the hypnotist will place him in a ridiculous attitude, or one repugnant to his sense of propriety, he will resolve beforehand that he will not obey the suggestion. If, then, the anticipated suggestion is made by the hypnotist it will be strongly resisted, and the potency of the resistance will be in exact proportion to the subject's innate sense of dignity or propriety. If that is very strong, and the hypnotist insists upon his suggestion, the subject will be restored to his normal condition.

(2) *Suggestions of moral education and fixed principles* are of a cognate character to the foregoing. These reach the very heart of the subject under consideration. Thus, if a subject is told to do anything that is contrary to the settled principles of his life, he will resist the suggestion with all the force of his moral nature. Consequently, when an immoral or a criminal suggestion is made by a hypnotist, whether it is obeyed or not is purely a question of moral character. If the subject is strongly intrenched in moral rectitude, he will resist the suggestion; and, if the hypnotist persists, the subject will be restored to normal consciousness with a nervous shock proportioned to the infamy of the suggestion. "Strength of mind" is not a factor in the case. Strength of "will," in the ordinary acceptation of the term, has nothing to do with the result. "Will," in the psychic sense, is nothing more nor less than *désire*. Consequently, if the subject's desire to obey the dictates of conscience is stronger than his desire to obey the suggestions of the hypnotist, the auto-suggestion must prevail. In other words, there is no such thing in real life as a hypnotist having absolute control of a subject against the will of the latter.

(3) *Instinctive auto-suggestions* are those which arise from the natural desire to protect one's own life or that of his wife or children. They are by far the strongest auto-suggestions which a criminal hypnotist would

have to encounter in an effort to procure the commission of a crime by means of suggestion. It has often been said that a criminal hypnotist would have the power to induce a subject to commit suicide, or to procure an abortion, by means of suggestion. But such a use of that power is obviously out of the question when we consider the inherent strength of the instinct of self-preservation, and the potency of that subjective clinging to the life of the foetus which is the inherent attribute of every mother. Besides, the same instinct of self-preservation would constitute a potent factor in case of an attempt to instigate the commission of a murder. The subject would instinctively reason up to the consequences to himself in case of detection; and, even though his moral principles might not constitute an auto-suggestion of sufficient potency to enable him to withstand the suggestion of a criminal hypnotist, his own instinct of self-preservation would more than likely have that effect.

(4) *Suggestions of the environment* are those suggestions which arise spontaneously in the mind of the subject from his knowledge of the nature of the experiments about to be made, of the character of the persons present, the objects of the experiments, and the desires of the experimenters.

In the whole range of experimental hypnotism there are no auto-suggestions that are more apt to modify results than the suggestions of the environment are. And there are none that are disregarded by a certain class of experimenters with such persistent, aggressive fatuity. Indeed, it is somewhat difficult at all times to intelligently eliminate these suggestions; and in a certain class of experiments it is practically impossible. The experiments which we are now considering belong to that class; and it may be set down as an axiom in experimental hypnotism that *no laboratory experiment conducted for the purpose of ascertaining whether suggestion can be successfully employed to induce an hypnotic subject to perpetrate a crime is of any evidential value whatever.*

When a subject is hypnotized for that purpose he knows that he is among friends. He knows that they are law-abiding citizens, who will take care that no harm shall result from the experiments about to be made. He generally knows that he is expected to carry out all suggestions that are made to him. He is very probably aware that he is expected to demonstrate the truth of the proposition that a criminal hypnotist can compel his subject to commit crime. Like all hypnotic subjects, he is anxious to win applause—to create astonishment. In short, he knows that he is the central figure in a comedy or farce which is about to be played in the interests of "science," and he feels that he is the "scientist." The inevitable consequence is that he resolves to carry out every suggestion of the hypnotist, knowing that no harm can possibly result. A paper dagger

is placed in his hands, and he is told that a certain gentleman present is an enemy who "needs killing." This he is ready to do, and he proceeds to thrust his paper dagger into the heart of his "enemy," amid the applause of the assembled wisdom.

It is obvious that the moral character of the subject cannot enter as a factor in an experimental case of this kind. He is simply a player in a farce in which he assumes the rôle of the heavy villain. Moreover, the result could be easily reversed by simply suggesting to the subject that he was expected to disobey the criminal suggestions of the hypnotist. In short, the subject in such experiments will do just what he believes to be expected of him ; and the suggestions of the environment will always afford some hint as to that, even if they amount to nothing more than an assurance that it is perfectly safe for him to obey the suggestions made by the hypnotist. It is obvious that laboratory experiments can go no further than the enactment of a farce. No one would dare to place a real dagger or a loaded pistol in the hands of a hypnotized subject and suggest the murder of a real person.*

Space forbids the citation of authorities to sustain the foregoing propositions, although they are numerous.†

It must be obvious to the intelligent reader that laboratory and platform experiments in this line have no possible evidential value. And when we remember that all the hue and cry that has been raised on the subject of "hypnotism and crime" is based upon the same laboratory experiments, it will be seen that the public has been led into an error of enormous proportions, and of infinite moment in the administration of criminal justice. This, however, only pertains to the value of laboratory experiments as evidence. It must not be forgotten that while they do not prove that hypnotism can be employed for criminal purposes, neither do they disprove that proposition. It simply demonstrates the necessity for eliminating the results of experimental investigation from consideration.

The question of fact still remains : Can hypnotism be successfully employed for the perpetration of crime ? My remarks relating to auto-suggestions arising from the moral education and the fixed principles of

* Since the manuscript of this paper was forwarded to the publishers, a new book has been placed in my hands, entitled "Hypnotism : How it is Done ; Its Uses and Dangers," by Dr. James R. Cocke, of Boston. This gentleman had the courage to make a practical experiment in this line. Standing in front of a deeply hypnotized subject, he placed a piece of cardboard in her hands, telling her that it was a dagger, and commanded her to stab him. This command she immediately obeyed with great alacrity. He then handed her an open pocket knife, and again commanded her to stab him. She raised her hand as if to execute the command, but hesitated, and immediately had an hysterical attack, which, of course, put an end to the experiment. The doctor adds : "I have tried similar experiments upon thirty or forty people with similar results." He also states that he made a number of tests to prove that the subject was deeply hypnotized.

† For a fuller discussion of the subject, and a collection of authorities, see "The Law of Psychic Phenomena," chapter x.

the subject will have prepared the reader's mind for the only rational answer, viz., it is purely a question of moral character. A criminal hypnotist in control of a criminal subject could undoubtedly procure the commission of a crime under exceptionally favorable circumstances. But a criminal hypnotist would simply waste his energies in hypnotizing a criminal subject; for a man of that character could, without doubt, be just as easily manipulated in his normal condition. Be that as it may, the fact remains that *when a man sets up hypnotism as a defence in a criminal trial he proclaims himself a criminal character.*

Beyond what has already been said of the worthlessness of experimental investigation, this is the only general proposition that can be predicated with certainty from a knowledge of the fundamental laws of hypnotism. But it practically covers the whole ground.

The first legal question that arises is, How far ought hypnotism to be admitted as a defence when it is pleaded? My answer is that it should never, under any circumstances, be admitted as a defence for the one who is clearly proved to have committed the crime. Drunkenness cannot be urged as a defence, and there is infinitely less reason for admitting hypnotism. In the one case a good man may be so far crazed by liquor as to become, in fact, utterly irresponsible. Yet the fact is not admitted as a defence, on the ground that he voluntarily rendered himself irresponsible by getting intoxicated. The hypnotic subject should be held to the same rule and for the same reason; for no man can be hypnotized against his will. This is practically the universal testimony of all the scientific writers on the subject. He voluntarily places himself in the power of a hypnotist whom he more than probably knows to be a criminal character, and he should be held to the same accountability for the results as if he had voluntarily "placed an enemy in his mouth to steal away his brains." Moreover, as I have previously shown, the hypnotized subject will never commit a crime in that state that he would not commit in his normal condition.

The next legal question is as to the admissibility of the testimony of the alleged hypnotic subject in a criminal prosecution of the alleged hypnotist as an accessory before the fact. It is difficult to imagine any legal grounds for the admission of his testimony at all; for if it is true that he was so deeply hypnotized as to be an irresponsible agent in the hands of the hypnotist, he was necessarily in a state that would preclude the possibility of his having any definite recollection of what happened. Indeed, his whole testimony would be open to the suspicion that he was merely reciting the details of a subjective hallucination. In that case his testimony would be literally "of such stuff as dreams are made of"—the "baseless fabric of a vision." Obviously, it should have no more

standing in a court of justice than an alleged dream. Consequently, if it is clearly proved that he was hypnotized, his own testimony should be excluded as against the other party concerning what happened during the period of his irresponsibility.

This brings up the question so often mooted as to the propriety of hypnotizing a party in court for the purpose of questioning him concerning what happened to him during a previous hypnotization. From a legal standpoint this is a most intensely absurd proposition. Not one of the conditions which give value to human testimony would be present. In the first place, he could not be punished for perjury if he swore falsely ; and the instinct of self-preservation would cause him to swear falsely if the truth would militate against him. Moreover, being in a hypnotic state, he would be amenable to control by suggestion, and a cross-examination would utterly confuse him. A cross-examination by a competent lawyer consists largely of artful suggestions in the form of leading questions ; and a hypnotized witness would necessarily either be controlled by them or restored to normal consciousness by a conflict of suggestions. Clearly, a hypnotized subject can have no legitimate standing as a witness in a court of justice.

I have now briefly examined the salient features of the problem from both the psychological and legal standpoints, and I hope that I have made it as clear to others as it is to me that its psychological features are less repulsive and dangerous to the public than many interested writers have pictured them, and that the few legal problems involved are easy of solution without a resort to legislation. *Hypnotism has no legitimate place in criminal jurisprudence.* The attempt to thrust it into that field is the result of a determination on the part of interested parties to confine the uses of hypnotism to a select few. This effort has been aided by popular ignorance and criminal instinct, until our courts of justice are now threatened with an inundation of cases involving questions that are new and strange to lawyers and judges, and threaten jurors with paralysis. It is humiliating, but it is true, that in the last quarter of the nineteenth century we are threatened with a repetition of the insanity of the seventeenth. The ghost of Cotton Mather stalks abroad at noonday, and gibbers from the forum.
—*New York Medical Journal.*

Clinical Notes.

A CASE OF SEPTIC ENDOCARDITIS,

UNDER THE CARE OF

J. E. GRAHAM, M.D., M.R.C.P. LOND.,

IN THE TORONTO GENERAL HOSPITAL.

(Reported by THOMAS McCRAE.)

S. H. M., æt. 35 years ; occupation, photo-engraver.
Family history. Father died, æt. 57, from stomach trouble. Mother died, æt. 33, after confinement. Brothers—one older, in good health ; one younger, died of pulmonary tuberculosis a day or two before this patient. Uncles—on mother's side—one died of lung trouble ; another of yellow fever ; on father's side—all healthy. Father of two children, æt. 11 and 5½ years ; both healthy. Always well nourished ; moderate drinker, spirits and malt liquors. Has drunk since age of 21, but says never to excess.

Occupation. Photo-engraver. Has worked indoors for last three years, previously outdoors. Widower, wife died four and a half years ago of phthisis ; her illness lasted one and a half years. Patient had diseases of childhood, congestion of lungs at age of 23, and had rheumatism in the following winter, which attacked his knees ; he was laid up for some days. This has recurred off and on ever since nearly every winter, but he was never laid up until last fall, when he was in bed for three days.

Erysipelas, one and a half years ago, on face, not very severe.

Gonorrhœa, last September, a light attack.

Chancroid, three years ago. Treated it himself with nitric acid, and was told by a medical man afterwards that it was a hard chancre. He took mercury, as hydrarg. cum creta, for nine months then ; but no secondary symptoms ever appeared, and as the sore had appeared about seven days after exposure the conclusion is that he had not syphilis.

Last October or November he stumbled while carrying a heavy frame and injured himself in the right groin. In a few days the right testicle swelled and became hard, and the scrotum purplish red in color. He applied hot water, and it subsided in about a week. After this his appe-

tite lessened, although he was working hard and putting in extra time. Lost flesh, sixteen to twenty pounds in three months.

Saturday, December 29th, to January 2nd, 1895. No appetite, headache, felt very weak, ate oysters, and drank milk and whiskey; felt very "tough," as he put it, and kept at work though not feeling fit for work.

Wednesday, January 2nd. Went to bed, and called in Dr. W. P. Caven on Thursday, who advised his going to the hospital. He was admitted Friday, January 4th.

Examination. General facts: Height, 5 feet 5½ inches; weight, 130 lbs.; normal 146-150 lbs.; fair muscular and general development; slightly anæmic; odor on turning down the bedclothes, a musty, cadaveric odor, quite noticeable on January 5th, but not evident on examination, January 8th. Breath had the same musty odor on 8th—gone on following day. Urine, on boiling with nitric acid, gave a peculiar musty smell. Large growth of hair on chest and abdomen. Baldness, a hereditary peculiarity in his family. He was bald at 23.

Alimentary system. Teeth fairly good, gums pale.

Tongue: Edges purplish in color; large amount of white coating, particularly on the central portion.

Bowels: Has had constipation, and attacks of hæmorrhoids. No abnormal digestive symptoms.

Abdomen: No swelling or tympanitis, no spots, no tenderness.

Liver: Enlarged about one inch below the costal margin; could be felt.

Vomiting occurred on January 11, 12, and 13—a dark-brown fluid; considerable nausea.

Circulatory system. Says that sometimes, at intervals, after retiring at night, he could feel his heart throbbing very fast, and everything would seem to go with it. Never had faintness or any dyspnoea on exertion. Has noticed that since a boy, when in cold water, the blood would seem to leave his fingers, which would be perfectly pale. Has been troubled with cold feet.

Inspection: Cardiac impulse in fifth interspace; has a fluttering appearance, extended laterally for one and a half inches in the interspace. Maximum point four and a half inches from the median line.

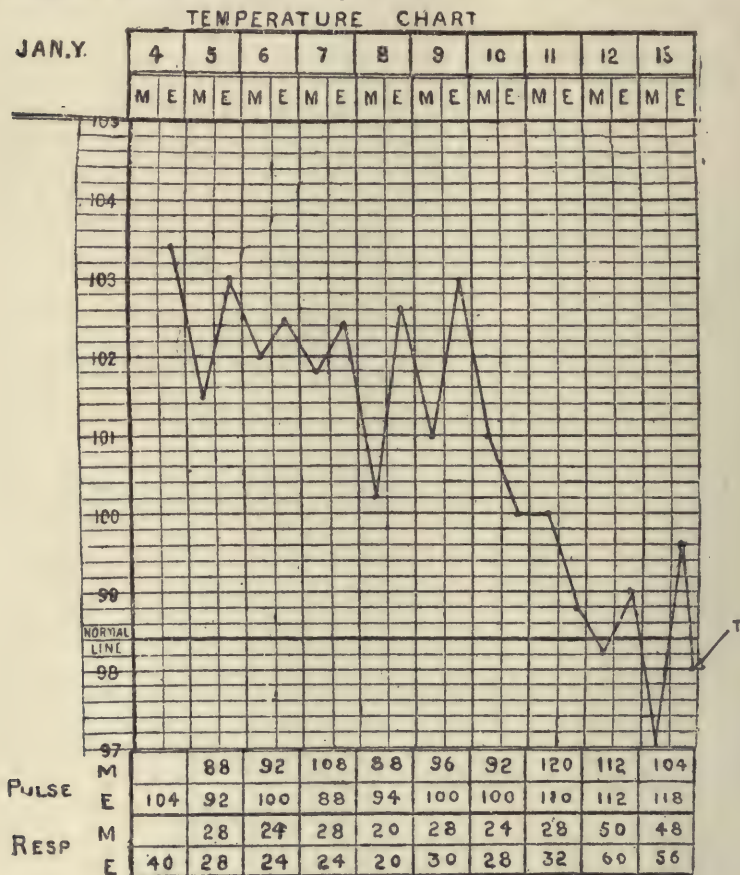
Percussion: Cardiac dullness extends from the median line to the left nipple line, or slightly outside it.

Auscultation: Apex: A rough blowing murmur replacing the first sound and extending up to the second sound. Carried round towards the angle of the scapula with a booming quality. At point just internal to the nipple both sounds could be heard, but very faintly, and with hardly any murmurs.

Base : The aortic murmurs heard more distinctly than at the apex.

Aortic ana : The murmurs with the first and second sounds heard very distinctly, and they are carried up into the neck.

Pulmonary ana : Sounds not specially distinct ; not accentuated. At one time there seemed to be a presystolic mitral murmur. This seemed to disappear later on, viz., January 10 and 11.



T Temperature at 10 p.m. Death at 1.15 a.m., January 14th.

Lesions diagnosed : Mitral regurgitant. (Mitral obstructive—question.) Aortic obstructive and regurgitant.

Pulse : Ninety-six at time of examination. Considerable force, soft feel ; quickly gathers force and falls away again ; a water-hammer pulse.

Arteries : Walls not thickened ; auscultation over the crural, get a double sound. The first one loud, with a knocking character, the second one very faint.

Capillaries : Capillary pulse appeared to be present under one of the toe nails, not got on the forehead.

Veins : No venous pulsation in the neck.

Respiratory system. Breathing : Three days ago he had severe pain on breathing in the right anterior part of the chest. Absent at time of examination, January 8. At the end of a deep breath there was a sort of catch, which he describes as a sob.

January 10. Rate 40 to 50 after talking. Sharp and quick, and a short, quick cough.

January 11. Breathing abdominal altogether, 60 ; says no definite pain, but an uneasy feeling over the whole of the chest. Cough : None at first ; a dry, hacking cough developed. Sputum, none.

Inspection : Breathing principally abdominal. Very little costal expansion. The intercostal spaces do not move.

Palpation : Vocal fremitus normal.

Percussion : Dullness over the right clavicle, and perhaps slight in the right infraclavicular space. Behind—slight dullness at the base of the left lung.

Auscultation : Roughened inspiration in right infraclavicular region, and at left posterior apex. Very slight. The whole chest examination was not at all decisive on January 8.

January 10. The inspiratory sound was accentuated and roughened over the whole front of the chest. On auscultation—Dr. Graham—there seemed to be very slight traces of crepitations on both sides in the axillary line low down.

January 11. Crepitations on both sides. Sounded like the crepitations of cedema.

January 12. Exaggerated inspiratory sound over the whole surface of the chest, with absence of the expiratory sounds.

The dyspnoea and rapid breathing appeared suddenly on January 10, and were more pronounced on the following day. Easier on January 12.

Integumentary system. Sweats : Has had abundant sweats for about one week before admission, and since in hospital. Come on at irregular times when he is asleep ; had four in one night.

Urinary system. Urine had to be drawn by catheter several times, January 9, 12, and 13.

Urine : January 8—Specific gravity, 1027. Slightly acid. Albumin and sugar, none. Ehrlich's reaction absent. Microscopical examination, nothing abnormal.

Urine : January 13—Specific gravity, 1020. Albumin, none. Sugar, none. Urea, 1.26 per cent. Indican, none. Ehrlich's reaction absent. Crystals, amorphous urates, uric acid, oxalate of lime.

NOTE.—The onset of dyspnoea in this case was very sudden. The patient, while breathing at the rate of 60, complained only of an uneasy feeling. He had no positive pain. This was on January 11. On the following day he was much easier.

Post-mortem. January 14. Nine hours after death.

Inspection: Well-nourished muscular man. Post-mortem rigidity slight. Staining slight.

Abdomen: Slight distension of the intestines.

Thorax: Large amount of fluid. Clear serous transudate on both sides. No adhesions.

Pericardium: Large amount of effusion. Clear serous transudate.

Heart: Weight, 18 ozs. Subserous ecchymoses. Extensive mixed clots in both sides. More ante-mortem than post-mortem clot in the right heart. Nearly altogether post-mortem clot in the left heart. Coronary veins very much dilated with blood. Hypertrophy and dilatation of both sides. Muscle: Pale, flabby; marked granular degeneration; myocarditis. Valves: Aortic, one cusp healthy, the one which is anterior and towards the septum; other two cusps covered by large coarse vegetations and a clot mass; both considerably damaged; old chronic thickening with recent fibrinous deposit and ulceration of one cusp. Mitral valves, healthy.

Lungs: Bronchi and lungs full of frothy fluid. Left: Sodden with œdema; no signs of any trouble at the posterior apex or at the base. Right: Œdematous like the left. A thrombus and clot in one of the pulmonary artery branches.

Spleen: Weight, 7 ozs.; firm, large, pale; a number of yellow nodules from the size of a pea down to pin points; old nodules thought to be.

Kidneys: Left, weight, $5\frac{1}{2}$ ozs.; very firm and hard; no nodules. Right, very firm and hard. An old depressed scar, due to an old plug.

Stomach: Adhesions joining it, at the pylorus, to the colon and gall bladder; dilated; showed catarrh; post-mortem, congestion and hæmorrhage as the result of obstruction; blood mixed with mucus.

Liver and gall bladder: Adhesions joining the gall bladder to the colon. Thrombus in the portal vein, partly ante-mortem and partly post-mortem. Formed a cast of a number of the smaller veins.

Aorta: Full of post-mortem clot down to the bifurcation.

Mesenteric glands could be felt, but were not very much enlarged.

Intestines: Congestion only.

NOTES ON CÆSAREAN SECTION, WITH CASE.

BY ERNEST HALL, M.D.,

Victoria, B.C. (at present in Germany).

AMONG the many interesting vibrations of medical opinion which have characterized this decade, possibly not the least prominent has been that in reference to the estimation of the comparative merits of the various surgical procedures for the relief of dystocia. With our present armamentarium of methods and experience the teaching may be accepted, aside from dogma or prejudice, that the destruction of the living unborn child is rarely, if ever, justifiable.

Cæsarean section, the Parro, Sanger, and Thomas operations, with the late revival of symphyseotomy, have had their admirers, but these latter are being abandoned, and we notice a gradual return, more especially throughout Germany, to the time-honored Cæsarean section. Possibly one of the most able and enthusiastic advocates of this procedure is Professor Olshausen, of Berlin University, who, within the last four years, has performed twenty-two sections with but one death—his second case—which he attributes to a lack of complete asepticism on his part. The mortality in the Berlin hospitals for the last two hundred sections has been but five per cent.

After the indications for section have been determined, including the presence of the foetal heart sounds, and a consideration of the general condition of the mother, Professor Olshausen directs that the labor should be allowed to proceed naturally until the os is dilated to the size of half a dollar; then, after complete aseptic preparation, chloroform should be administered, and the operation proceeded with. A large median section is made, so that the gravid uterus can be brought completely without the abdomen. The abdominal walls are closed at once with clamps, and aseptic towels placed upon the abdomen around the neck of the uterus, which is firmly held by an assistant, who compresses sufficiently to control the circulation. The operator then incises the uterus, beginning at the fundus and cutting completely through the uterus muscle with one incision, by which means the edges of the uterine wound are not rendered irregular and frayed,

as they would be if superficial incisions were made, allowing a retraction and a relative disturbance of the superficial muscular layers. The uterus being opened, the contents are extracted as rapidly as possible. Contraction usually begins at once; the uterus is gently kneaded by the hands until contraction is fairly firm. Catgut sutures are then introduced, not more than one centimetre apart, wholly within the muscular structure, care being taken not to implicate the endometrium. The uterine peritoneum is then closed upon this with fine gut suture, the clamps removed from the abdominal muscles, and the abdomen closed as in ordinary abdominal section. Professor Olshausen has performed this operation four times upon the same woman. The first time he made an extensive ventrofixation, and the three subsequent operations have been done without opening the peritoneal cavity. The worthy professor is represented as having said that if women only knew how easily they could obtain delivery through the abdomen many would seek this method in order to preserve the ante-partum condition of the external genitals.

DISEASE OF ATLOAXOID ARTICULATION, WITH ULCERATION OF VERTEBRAL ARTERY.*

BY J. BARKER PETERS, M.B.,
House Surgeon, Toronto General Hospital.

THE patient was admitted to the General Hospital, January 5th, 1894. Previous history of the patient not known. She said that for the last ten days she had had sore throat, with difficulty in swallowing, and a little swelling of the left side of the neck.

On examination, temperature $99\frac{1}{5}^{\circ}$, respiration 28, pulse 120. Patient's throat was a little inflamed. The glands were enlarged in the submaxillary region. There was difficulty in swallowing, and pain in neck, but none on motion. Epithelial casts and albumin were present in the urine.

Patient ordered to have poultices applied externally, and a gargle of iron and potash chloride.

January 7. A suspicious membrane appeared on the throat, and patient was isolated. Throat sprayed with hydrogen peroxide. Next day a swelling was seen on the back of the pharynx, on the left side, and was diagnosed as post-pharyngeal abscess. This did not increase in size, and gave no bad symptoms, patient feeling better than before.

January 12. Patient was suddenly seized with severe pain on left side of neck and head, extending upwards and backwards towards occipital region. Was given morphia, which relieved the pain.

Next morning she was again seized with severe pain in the same region. The swelling of the neck was very much increased, and tumor was very tense and seemed to be fluid. Pain lasted only about two hours. Temperature that night, $103\frac{2}{5}^{\circ}$.

January 14. Operation by Dr. Cameron.

An incision about two and one-half inches long was made along the posterior border of the sterno-mastoid. A large quantity of blood clot was scooped out. When the finger was inserted into the wound, it could be pressed back in the cavity opened to nearly the median line. A large hæmorrhage suddenly occurred, and the wound was firmly packed with iodoform gauze, which stopped the bleeding.

*Read before the Toronto Pathological Society.

January 17. Wound dressed seventy-two hours after operation. Some pus was present, and a drainage tube was left in the wound.

A severe hæmorrhage occurred at eleven p.m., soaking dressing, clothing, and bedding of the patient. She was very much exhausted. The bleeding stopped spontaneously. While wound was being dressed, patient fainted. Wound packed with iodoform gauze.

January 22. Another severe hæmorrhage occurred. Being called to attend patient, I made pressure with a thumb on the carotid about an inch above the clavicle, but found that the blood still spurted from the wound. I then pressed down as low as possible with the thumb behind the clavicle, and was able to control the bleeding.

Patient given saline solution, injected into thigh, and recovered but slowly.

January 24. Had another hæmorrhage. Stimulants and saline solution subcutaneously failed to revive her. She lived only three hours after.

Post-mortem examination. Incision for operation was enlarged; finger inserted into cavity; felt bare bone in the back part of the cavity, in region of the transverse processes. The cavity did not extend forwards into pharynx, but there was œdema in back. The common carotid was then dissected out, and on injecting it the water did not escape from the abscess cavity. The vertebral artery was then dissected out and tried, when water was found to escape very freely from the back part of the cavity. On exposing this part the joint between the atlas and axis on the left side was found to be disorganized, and in this situation the vertebral artery was found to be ulcerated through as it passed the joint, and the water, on being injected into the vessel low down, was seen issuing from the vessel opposite the above-mentioned joint.

SPECIMENS FROM A CASE OF ARTERIO-SCLEROSIS.*

BY WM. OLDRIGHT, M.A., M.D.,

TORONTO.

THE following specimens are submitted :

(1) Heart, with attached vessels as far as the middle third of the carotids and subclavians.

(2) Granular kidneys.

(3) Cyst, apparently parovarian.

History. E.T., æt. 66. Married, and multipara. The patient, though highly moral and respectable, had used beer and malt liquors for many years. Although I had known her for a long time, I had not attended her professionally. During my first visit she showed me a small pulsating tumor about the middle of the left common carotid. On palpation there was a feeling of lateral expansion with each pulsation. My diagnosis was that of aneurismal dilatation of the carotid. She told me that Sir Morell Mackenzie had pronounced it an aneurism, and warned her to be very careful to avoid strain, and advised her as to what she should do whilst awaiting surgical aid in the event of rupture of the tumor. Another practitioner in this city had given the same diagnosis.

I did not see her again until August of this year, when I visited her four times. She had dyspnoea on slight exertion, a rapid, feeble pulse, with great tension. The face had a slightly puffy appearance. On auscultation the physical signs of cardiac hypertrophy were present. On the 8th of August I examined the urine, and found albumin present to the extent of about one-eighth in volume on settling. On the 16th (eight days later) I again examined it, and found the merest trace. I ordered a mixture containing strychnine, which she continued to take until the time of my next attendance, which extended from the 16th to the 23rd December, death occurring on the latter date. During this illness the same symptoms and signs were present in increased form. In addition, there were crepitant and sub-crepitant râles posteriorly in both lungs. The sputum, what little there was, was white and tenacious; no rusty color, no elevation of temperature, no pneumonic countenance. I attributed the crepitant sounds to hypostatic serous exudation.

* Read before the Toronto Pathological Society.

I examined the urine on the only occasion obtainable. It contained albumin about one-third of its volume. Specific gravity 1010. Scanty.

POST-MORTEM EXAMINATION.

Thoracic walls. The first point in the post-mortem worthy of notice was, to me, the most interesting and peculiar. Wishing to follow up the carotid and subclavian vessels, I determined to divide the ribs outside of their junction with the cartilages, and I found that the knife went through them quite easily, more easily than one can usually cut the cartilages. I then found that they were very friable and somewhat thin. Dr. Caven will report later, and more in detail, upon their condition, as also upon the heart cavities, and the histology of the various specimens.

Lungs. There were old adhesions between the pleural surfaces, especially on the right side. There were about ten ounces of serous fluid in the left pleural cavity

Heart. Unusual deposit of fat on the upper border of left ventricle. This was hypertrophied.

The *aorta* was dilated. On cutting across the descending aorta in the thorax, thin plates could be felt in its walls. The arteries branching from it were friable. The left subclavian broke across under moderate traction whilst dissecting it from its surroundings.

A curious fact is that there is no post-mortem evidence of aneurismal dilatation of the left carotid. My first impression was that there must have been an excessive thinning of the whole circumference of the wall of the carotid at that point, which would allow a bulging whilst the blood pressure existed, but disappearing after death. Whilst there is some evidence of disease of the intima, there is not sufficient change to support this view, and I now believe that a pulsating projection of thyroid gland shoved the carotid outward, and that the tortuous bulging, or curve, of the carotid formed the other side of what thus gave the sensation of a rounded, pulsating tumor.

Kidneys. Both were contracted and granular, the right, especially, being smaller. The left contained one or two small cysts.

The *cyst* shown in connection with the *left* appendage was apparently outside the shrivelled ovary. It is about two inches in diameter.

The *liver* was enlarged and fatty.

PAINFUL ŒDEMA OF THE LEG : PRESSURE TREATMENT.

By W. W. BREMNER, M.D.,

Late Assistant Surgeon, New York Hospital for Ruptured and Crippled, etc.,

TORONTO.

IN the December number of THE PRACTITIONER there is a very interesting article by Dr. Primrose on the treatment of sprains by pressure. He recommends cotton-wool tightly bandaged on to accomplish the end, and it is a very excellent method. It is certain that the value of even pressure in surgical dressings is not as widely recognized as it ought to be ; and in injuries of the lower extremity, such as sprains and bruises, or in diseases such as ulcers, it is especially valuable.

In the New York *Medical Record*, April 9th, 1892, the writer published an article on ulcers of the leg and their treatment by pressure, giving minute directions as to technique, appending a synopsis of the first hundred cases so treated, and his experience since then, with the method therein described, has been even more favorable.

A recent cure of painful œdema with superficial ulceration of the leg will well illustrate the success of the method.

A gentleman, aged 72, came to me on January 4th, 1895, with a leg very much swollen and superficially ulcerated. He stated that four years before he had suffered from an attack of phlebitis in the limb, and that since that time the leg had remained more or less swollen, and that latterly it had become very painful.

On examination the limb was found very much swollen, discolored, and superficially ulcerated. The pain was so great that his life was rendered miserable, and the leg was so sensitive that it was with difficulty he could put on or remove his stockings and shoes. There was lameness in walking.

A local dressing was applied to the ulcerations of carbolic lotion 1 to 80, on lint, under oil silk, and over this a small piece of gamgee tissue. The leg was then evenly and very firmly bandaged from the toes to the knee with circular stockinette bandage, twelve yards being used, so as to give plenty of support. This dressing was changed every second day for four times, when the lotion was discontinued, and an aristol ointment

spread on a little gamgee tissue without oil silk being used. This dressing was changed every third or fourth day. The first dressing removed all actual pain, and by the third dressing all sensitiveness was gone; every trace of swelling had also disappeared. As the patient expressed it, "His leg felt as well as ever it did."

The ulcerations were all healed by January 28th, and the patient was discharged a few days afterward, the interval being used to teach him how to apply the bandage himself, as, at such an age, it is advisable to continue its use until all danger of relapse is over.

During all the treatment the patient walked about freely, and attended to his business with more freedom than before its commencement.

In the treatment of severe sprains and bruises, this circular stockinette bandage will also be found most useful, as it gives such firm, equable pressure, at the same time permitting of free motion. To one unaccustomed to its use it would seem almost incredible what prompt and permanent relief is given, if well applied.

In conclusion, I would like to direct attention to some of the advantages of this method. First, the bandage is perfectly flexible, and permits of free motion, while giving even pressure. Second, it is porous, permitting of free escape for all perspiration, etc. Third, it is absorbent, and, used in conjunction with gamgee tissue, provides for complete absorption of any discharge which may be present. Fourth, it is so thin that a patient can wear an ordinary shoe.

Progress of Medicine.

MEDICINE

IN CHARGE OF

J. E. GRAHAM, M.D., M.R.C.P. Lond.,

Professor of Medicine and Clinical Medicine, University of Toronto; Physician to the
Toronto General Hospital, and St. Michael's Hospital;

AND

W. P. CAVEN, M.B., Tor.

Lecturer in Clinical Medicine in the University of Toronto; Physician to
Home for Incurables.

GLYCOSURIA FROM INGESTION OF THYROID EXTRACT.

W. Dale James (*British Journal of Dermatology*, June, 1894) gives notes of a case, the patient a man of 45, and "an old psoriatic." Following the taking of four tabloids of the extract daily, nervous symptoms, depression, palpitation, flushings began to appear. After two weeks he complained of polydipsia; his urine was much increased in quantity, and acetone could be detected in his breath by its odor. The specific gravity of his urine was 1032 and sugar was found at every test. He was placed on diabetic diet and the thyroid administration stopped. In less than a month the sugar disappeared, and in six weeks the patient was entirely restored to health, except for his psoriasis, which was not in any way improved by the treatment.—*Journal of Cutaneous and Genito-Urinary Diseases*.

POLYURIA IN CHRONIC PULMONARY TUBERCULOSIS.

Robin has carefully studied the urine in a large number of cases of chronic pulmonary tuberculosis. He concludes (*Archives générales de Médecine*, June, 1894, tome clxxiii., No. 6, p. 653) that, in general, the quantity of urine is slightly increased during the first stages of chronic pulmonary tuberculosis; it is about normal in the second stage, and more frequently diminished in the third stage. In each stage, however, a certain number (20 per cent.) of patients depart from the rule, and exhibit

polyuria more or less marked. Polyuria is relatively more frequent in young adults than in the aged. The polyuria of the first stage of phthisis may present the characteristics of phosphaturia, or there may be simply an increase of urinary water without notably heightened excretion of other constituents of normal urine. Exaggerated azoturia due to denu-trition is very rare. Polyuria of the latter stages of phthisis is usually related with "mixed nephritis," tuberculous nephritis, or amyloid degeneration of the kidneys. Phosphaturia and essential polyuria seem to predispose to tuberculosis. There is likewise, however, a veritable pre-tuberculous polyuria, sometimes phosphatic, sometimes simple, that appears to be associated with cases of renal congestion. It is distinguished from the other form by the rapid supervention of pulmonary tuberculosis, and appears to be the first manifestation of the struggle of the organism with the bacilli and their toxic products. Transitory or reactional polyuria or phosphaturia has a favorable prognostic significance, while if permanent the phenomena are of unfavorable import. Oliguria depends upon accidents and complications, fever, sweating, diarrhoea, etc. A milk diet should be employed in cases of oliguria. Rectal injections of hydrogen sulphide are highly beneficial.

THE DIFFERENTIAL DIAGNOSIS BETWEEN PULMONARY SYPHILIS AND PULMONARY TUBERCULOSIS.

Rendu (*Bull. Méd.*, 1894, May 20, *Internationale klin. Rundschau*, viii. Jahrg., No. 27, p. 969) at a recent clinical lecture presented a case in which the question arose as to the existence of either syphilis or tuberculosis of the lungs or of both conditions in association. The case occurred in an old woman who had long been emaciated, and was cachectic, but without fever. The symptoms present were neither well defined nor characteristic. There was complaint of pain; of stiffness of the extremities, without noteworthy weakness or paræsthesia; of dyspnœa on exertion; and for a short time of a dry cough without expectoration. On physical examination of the lungs the respiratory and auscultatory phenomena were found normal anteriorly. Posteriorly, there was found dullness on percussion over the apex of the right lung, with roughened, prolonged expiration; but elsewhere the conditions in the lungs were normal. The area of cardiac dullness was not changed; the apex-beat was normal in strength and situation. On auscultation, a loud, rough, systolic murmur was heard, together with a softer and more superficial murmur. The patient, however, did not complain of any symptoms of cardiac insufficiency. The arteries were neither tortuous nor rigid. The liver was normal, and the urine contained no albumin. There was present a diffuse and characteristic syphilitic melanoderma. The nose

was painful and swollen. An iritis of two years' standing existed. There was complaint of nocturnal bone-pains and of headache. The woman gave a good family history, and had herself only suffered with measles. At the age of thirty she had had a sore mouth, followed a year later by pustules that left cicatrices. For several years after this her health was poor, but subsequently her condition improved. At this time she presented symptoms of bronchial catarrh, together with hæmoptysis, and also renewed symptoms of syphilis, despite active anti-syphilitic medication. In a discussion of the differential diagnosis, it was pointed out that against the existence of tuberculous process was the long duration of the case, the absence of expectoration (excluding a search for tubercle bacilli), of râles, and of concomitant symptoms. Although syphilis usually attacks the lower portion of the lungs, cases have been reported in which the apex has been invaded. It was further noted that syphilis and tuberculosis of the lung may occur in association, and also that tuberculosis may develop in a lung previously syphilitic. Indurating pneumonia was to be excluded by the absence of a history of an attack of acute pneumonia. It was thus probable that the pulmonary changes were syphilitic. In the absence of other etiologic factors, such as the infectious diseases and arteriosclerosis, the same origin had also by exclusion to be ascribed to the endocardial changes. The attack of measles was not thought an adequate cause. Finally, it was noted that marked improvement followed the administration of anti-syphilitic treatment, including mercury and potassium iodide.—*American Journal of the Medical Sciences.*

DRY MOUTH, OR XEROSTOMIA.

Dr. Thomas Harris showed a woman, æt. 30, who had good health until three or four years ago, when the affection began. The mouth was absolutely dry, and there was a complete arrest of secretion of all the salivary and buccal glands. There was also a decided enlargement of the parotid glands. The woman was anæmic, but all the organs appeared healthy. There was no disease of the pelvic viscera. Dr. Harris referred to the very few cases of the malady which had been recorded, and especially to two cases recorded by Mr. Jonathan Hutchinson of relapsing parotitis, one of which was associated with a certain amount of dry mouth. Dr. Harris regarded xerostomia as a functional nervous affection, and thought that, probably, the parotid enlargement had a similar cause, and he referred to Mr. Stephen Paget's communication on the relation of parotitis to injuries and diseases of the abdominal and pelvic viscera.—*Manchester Clinical Society, British Medical Journal.*

THERAPEUTICS

IN CHARGE OF

GRAHAM CHAMBERS, B.A., M.B. Tor.,

Professor of Analytical Chemistry and Toxicology, Ontario College of Pharmacy ; Lecturer
in Organic Chemistry and Toxicology, Woman's Medical College ;

AND

WILLIAM LEHMANN, M.B. Tor.,

Physician to the Home for Incurables and House of Providence.

FORMALIN "SCHERING."

The name "Formalin" has been given to a 40 per cent. solution of chemically pure formaldehyde in water.

Formaldehyde (CH_2O) is a gaseous body which is prepared by subjecting methylalcohol to oxidation. It is readily absorbed by water ; for this reason it is put on the market in the form of an aqueous solution termed "Formalin."

Formalin mixes with water in all proportions. It is, therefore, easy to prepare any dilution that is wanted.

Formalin has been found by Drs. Loew, Buchner, Aronson, Berlioz, Stahl, Liebreich, Lehmann, and others, to be an excellent disinfectant and antiseptic. The properties of formalin may be expressed as follows :

It has an extraordinarily active microbicide power, similar to that of sublimate, is comparatively non-poisonous, *attacks only the substance of the contagious materials*, and is very readily employed under all circumstances either as a liquid or in a gaseous form.

The enormous antiseptic power of formic aldehyde solutions and their comparative non-poisonousness have indicated the employment of formalin as a surgical disinfectant, and especially recommended as an external remedy for *lupus*, *cancerous* affections, and in very dilute (half per cent.) solution for the irrigation of cavities.

The effect of the preparation upon the human organism was tried by Dr. Gegner, of Erlangen (*Munchener Med. Wochenschrift*), and solutions from $\frac{1}{4}$ to 25 per cent. strength employed as gargles and lotions in the mouth and throat. He came to the conclusion that formalin was one of the strongest antibacterial remedies known, and that, although in an undi-

luted state its vapors and local irritant action on the mucous membrane contraindicated its use, he recommended the employment of 0.6 and 0.8 per cent. solutions as mouth washes, and 2.5 per cent. solutions in skin diseases, such as *psoriasis* and *lupus*.

At about the same time Prof. K. B. Lehmann, of Wursburg (*Munchener Med. Wochenschrift*), after studying the properties and characters of formalin, recommended it as the best and safest, as well as the cheapest, preparation for disinfecting clothes, toilet articles, and household goods, especially on account of the great extent to which it could be diluted and still preserve its activity.

FORMALIN AS AN ANTISEPTIC.

Drs. C. Slater and S. Rideal, of St. George's Hospital, London (*Lancet*), report on formalin as an antiseptic as follows :

The first series of experiments was made to determine the proportion of formic aldehyde required to inhibit the growth of specific micro-organisms. For this purpose formalin was added to tubes of bouillon so that they contained formic aldehyde in proportions ranging from 1 : 1000 to 1 : 20000. These tubes were then inoculated with the micro-organisms to be tested, capped, and placed in the incubator at the most favorable temperature for growth. The cultures used for inoculation were vigorous twenty-four-hours-old growths in bouillon or on agar. The results are embodied in the following table:

ORGANISM.	Proportion of Formic Aldehyde inhibiting growth.	Proportion of Formic Aldehyde allowing some growth.	Remarks.
<i>Staphylococcus pyogenes aur.</i>	1 : 5000	1 : 10000	{ Growth poor in 1 : 10000 and much delayed in 1 : 20000.
<i>Bacillus typhosus</i> - - -	1 : 15000	1 : 20000	
" <i>coli communis</i> - - -	1 : 7000	1 : 10000	Very scanty.
" <i>anthracis</i> - - -	1 : 15000	1 : 20000	After 72 hours' incubation.
<i>Spirillum cholerae</i> - - -	1 : 20000	—	Scanty growth on 6th day.
<i>Bacillus mallei</i> - - -	1 : 20000	—	—
" <i>pyocyaneus</i> - - -	1 : 7000	1 : 10000	On the 3rd day.
<i>M. prodigiosus</i> - - -	1 : 20000	—	—
<i>Bacillus lacticus</i> - - -	1 : 20000	—	—
" <i>butyricus</i> (Hueppe) -	1 : 20000	—	—

By these experiments formalin is shown to possess, in a high degree, the power of inhibiting the growth of various microbes. This power varies with the micro-organism tested, but is in all cases considerable, and would place formalin, in this respect, among the first three or four antiseptics in Koch's tables.

The time required by solutions containing 1 per cent. and 1 per mille of formic aldehyde to cause the death of various microbes was next determined. In experiments of this kind it is absolutely necessary that methods

be used in which the antiseptic is thoroughly removed from the test culture or great dilution secured, as the inhibitory action of formic aldehyde is so great. Sterile silk threads were soaked in cultures of the various micro-organisms and then transferred to the antiseptic. After exposure for various periods the threads were withdrawn, well washed in sterile water, and transferred to bouillon tubes, which were exposed to suitable temperatures. The cultures used were, in all cases, twenty-four-hours-old bouillon cultures. The culture tubes containing the treated threads were kept for more than eight days, in order to avoid errors from retarded growth. The tubes in which no growth took place were tested by inoculation, in order to determine whether they were still suitable for growth of the microbes, or whether the sterility was due to transferred antiseptic. They all yielded copious growths on secondary inoculation. Control experiments were made in all cases, the threads being soaked in water for a time equal to that of the maximum period of exposure to the antiseptic.

One per cent. solution : Threads examined at intervals of ten minutes gave :

ORGANISM.	Time required to kill the microbes.
Staphylococcus pyogenes aureus - - - - -	Between 50 and 60 min.
Bacillus typhosus - - - - -	" 40 " 50 "
" coli communis - - - - -	" 30 " 40 "
" anthracis - - - - -	Less than 15 minutes.
Spirillum cholerae - - - - -	" " 15 "

One per mille solution : In these experiments, where the time of exposure was over seven hours, a different method was adopted. The cultures were made in a known volume of bouillon, and an equal volume of diluted formalin was added, so that the resulting mixture contained 1 per mille of formic aldehyde. Bouillon tubes were inoculated from this solution. Threads were examined at intervals of half an hour. When the exposure was between seven hours and twelve hours the examination was hourly, and then after twenty-four hours. The following results were obtained :

ORGANISM.	Was not killed after.	Was killed.
Bacillus anthracis (no spores)	—	In 30 minutes.
Spirillum cholerae - - - - -	—	" 2 hours.
Staphylococcus aureus - - - - -	12 hours.	" 24 "
Bacillus typhosus - - - - -	12 "	" 24 "
" coli communis - - - - -	12 "	" 24 "
" mallei - - - - -	11 "	" 12 "
Putrefactive organisms - - - - -	24 "	—

Experiments were made to see how far these solutions might replace the 1 or 2 per cent. solution of carbolic acid frequently used for the preliminary disinfection of soiled linen before washing. Soiled cloths from the post-mortem room and sterilized cloths soaked in cultures were left for from twenty to twenty-four hours in 1 per cent. and 1 per mille solutions

of formic aldehyde. After washing in sterile water, they were examined by cultivation.

	1 per cent. solution.	1 per mille solution.
Cloths from post-mortem room,	Sterile	Not sterile
Cloths soaked in bacillus typhosus,	Sterile	Sterile
Cloths soaked in spirillum cholerae,	Sterile	Sterile
Cloths soaked in staphylococcus aureus,	Sterile	Sterile

The solutions are without any ill-effect on clothes, and are efficient as antiseptics, especially the 1 per cent. solution, and the more so as, in practice, the adherent formic aldehyde solution would not be removed.

An examination of the individual results shows that there is a marked engthening of the time required for development, as the time during which the antiseptic is allowed to act is increased, until the point at which death of the microbes occurs is reached. Thus, in the case of the bacillus typhosus acted on by 1 per cent. solution, while the control grows readily in twenty-four hours, the threads exposed for twenty minutes show no growth until after forty-eight hours, and those exposed for thirty minutes develop only after seventy-two hours. Similar results obtain in the case of the 1 per 1000 solutions and with the other organisms examined.

Formic aldehyde in solution and as a vapor possesses decidedly antiseptic and disinfectant properties, and its non-poisonous character, easy vaporization, and freedom from corrosive or other damaging action on fabrics will render it useful for many purposes of practical disinfection.

FORMALIN IN DERMATOLOGY.

At a recent meeting of the Parisian Society for Dermatology and Syphilography, Dr. Potterin reported upon the treatment of skin parasites with formalin. He considered that formalin belongs to the safest and most reliable antiseptics, for its vapors diffuse readily even through masses of fatty matter. This property makes it specially suitable for the treatment of deeply implanted sick hair, and also for the disinfection of the hair follicles filled with sebaceous matter. The application of a layer of absorbent cotton dipped in a 2 per cent. formalin solution, and covered over with an oil-skin bandage, is well tolerated. In case of irritation of the skin the bandage may be removed for a day.—*London Therapist*.

OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

Professor of Obstetrics in the University of Toronto; Obstetrician to
the Toronto General Hospital.

ASSISTED BY

H. CRAWFORD SCADDING, M.D.,

Physician to Victoria Hospital for Sick Children.

THE ETIOLOGY OF PUERPERAL FEVER.

The *University Medical Magazine* gives the following deductions from Dr. Herman's remarks in a discussion of puerperal fever:

(1) Puerperal fever is produced by micro-organisms which get into the system through wounds made in childbirth.

(2) These organisms are transferred by contact. They are not inhaled or swallowed.

(3) The transference of organisms is prevented by cleanliness, and the organisms are killed by antiseptics.

(4) The hands are the usual poison-bearers; next in frequency clothes and instruments.

(5) Investigation of a particular outbreak of puerperal fever should begin with inquiry into the precautions taken by doctors, nurses, and midwives to secure the cleanliness and disinfection of their hands, clothes, and instruments.

(6) There is no such thing as self-infection with puerperal fever. The causes supposed to produce "autogenetic" puerperal fever produce, in lying-in women defended by antiseptics from septic poison, only trivial illnesses.

(7) The inhalation of sewer gas causes in the puerperal woman the same symptoms as in other persons. There is no good evidence that, in women defended by antiseptics from septic poisoning, it produces symptoms like those of septicæmia.

(8) The poison of erysipelas of the skin produces in lying-in women erysipelas of the skin, and no other illness. But the poison of the disease known as phlegmonous erysipelas of cellular tissue produces puerperal fever.

(9) The poison of scarlet fever produces in lying-in women scarlet fever, and no other illness.

ALBUMINURIA OF PREGNANCY AS A CAUSE OF DEATH OF THE FÆTUS.

In twelve cases of the albuminuria of pregnancy recently observed by the author all the children were born in bad condition, only five of them surviving. In six the death was directly traceable to the toxæmia. In four cases multiple hæmorrhages had occurred into the placenta. These patients all came to him, however, in advanced stages of uræmic intoxication.

Speaking of the frequency with which these hæmorrhages are observed in albuminuria, the author mentions an instance in which the weight of the clots equalled that of the placenta itself. He emphasizes the importance of early treatment, and especially the use of the milk diet in the interests of the child as well as the mother. In 250 cases recently studied by Bridier there was a foetal mortality of 20 per cent., notwithstanding some treatment. The much larger mortality in Oui's cases, in which the milk diet had not been employed, is significant.

The induction of premature labor, the author thinks is indicated only after the milk treatment has failed to relieve the symptoms.

In the discussion, Chaleix laid stress on the importance of diuresis for the elimination of the toxins. In his hands the hypodermic injection of the physiological salt solution in large quantities had, in conjunction with the use of milk given through a stomach tube when the patient was unable to swallow, proved of marked service in desperate cases. The quantity of urine was increased, and both the maternal and the foetal condition improved.—*Brooklyn Medical Journal*.

 THE TREATMENT OF HÆMORRHAGE FROM PLACENTA PRÆVIA.

Dr. W. J. Smyly, Master of the Rotunda Hospital, Dublin, in opening the discussion on uterine hæmorrhage during the last two months of pregnancy, at the last meeting of the British Medical Association, spoke as follows respecting the treatment of hæmorrhage due to placenta prævia :

In almost every case of severe hæmorrhage the os will be found sufficiently dilated to admit two fingers ; a foot should then be brought down, when the rupture of the membranes, and the pressure of the foetal body upon the placenta, will control the hæmorrhage ; and the further progress of the case is left to natural efforts. Should flooding continue, however, gentle traction upon the leg of the foetus is all that is required. If any part of the foetus present excepting the lower extremity, version either by abdominal manipulation or by Braxton Hicks's bipolar method is a necessary preliminary to bringing down the foot. This is the routine practice, and is applicable to the great majority of cases. There are two conditions, however, in which it is inapplicable—first, where the os internum will not

admit two fingers ; and, secondly, where labor is so far advanced that version is impossible or unnecessary. In the first of these I should plug the vagina, but such cases are rarely met with. Out of fifty cases that we have treated in the Rotunda Hospital and extern maternity during the past four years I have not once met with such a case. When labor is far advanced, and the os well dilated, rupture of the membranes is all that is required.

Other methods of treating placenta prævia should be mentioned, but I do not recommend any of them. *Accouchement forcé* has, I hope, been universally abandoned. Dr. Barnes' method of separating the placenta from the lower zone of the uterus is good and scientific, but it does not with absolute certainty control the bleeding, and by rupturing the membranes early in labor it renders version more difficult, should it afterwards become necessary ; besides, the separation of the placenta with the finger, even with the most careful antiseptic precautions, is not free from risk. It is, however, preferable to the method still so frequently adopted of plugging the vagina until the os is sufficiently dilated to admit the hand, and then performing internal version, followed by extraction. This method entails a number of dangers, resulting in a maternal mortality of about 24 per cent. The plug itself is a source of danger, especially when it has to be frequently renewed. It may introduce septic matter from without, and causes a stagnation of the discharge which is liable to putrefaction ; besides, it entails loss of time and considerable hæmorrhage before the os is sufficiently dilated to effect delivery. The introduction of the hand may carry up septic matter from below, and favors the entrance of air into the veins, a recognized cause of death in these cases. The extraction of the child may cause deep cervical lacerations,* and the emptying of an imperfectly retracted uterus predisposes to atonic post-partum hæmorrhage. The method already recommended minimizes all these dangers. The early performance of version prevents excessive ante-partum hæmorrhage ; the plug is not employed, the hand is not introduced into the uterus, and the expulsion of the child being left to nature post-partum hæmorrhage is efficiently guarded against. The mortality following this method is under 7 per cent. Out of twenty cases treated in the wards of the Rotunda Hospital during the last four years and a half two patients only were lost ; one died of pulmonary embolism on the eighteenth day, and the other from rupture of the cervix, having been delivered during my absence by internal version followed by extraction ; she died in a few minutes. Excluding this case the mortality was under 6 per cent.—*British Medical Journal*.

PÆDIATRICS AND ORTHOPÆDICS

IN CHARGE OF

W. B. THISTLE, M.D., L.R.C.P. Lond.,

AND

B. E. McKENZIE, B.A., M.D.,

Lecturer on Orthopædics and on Surgical Anatomy in the Woman's Medical College, and
Surgeon to the Victoria Hospital for Sick Children, Toronto.

TUBERCULOSIS OF THE CHOROID.

In the January number of *The Archives of Pediatrics*, 1895, Dr. George Carpenter, of London, reproduces original drawings of tubercles of the choroid. Several cases are given in full, with most accurate descriptions of ophthalmoscopic appearances. In several instances the tubercles were discovered in children with symptoms of meningitis; in other cases there were no indications of meningeal involvement, but the patients were the subjects of spinal caries, hip-joint disease, rickets and malnutrition, pulmonary tuberculosis, or had only vague suspicious symptoms. In the last instance the discovery of choroidal tuberculosis made the diagnosis. Dr. Carpenter urges the importance of ophthalmoscopic examination for tubercles in every case where there is the slightest element of doubt. To illustrate this point, the following case is given *in extenso*:

On April 4th, 1893, I was called into consultation by Dr. Frederick Nicholls, of Corydon, to see Walter S., æt. eight years. Two years previously I had seen, with Dr. Nicholls, a sister of his, æt. ten years, suffering from abdominal tuberculosis, from which she died. The parents feared that this child, too, might be tuberculous. He had been attended by Dr. Nicholls since February 16th with gastric disturbance. From February 28th to April 4th his temperature had been irregular, never above 102.4° F., and at times the morning rises were in excess of the evening, but not invariably. When I saw him he was in his bed, and was dull and apathetic. The only abnormality that I could detect, apart from extra-puerile breath sounds, was an enlarged mesenteric gland, the size of the top of one's thumb, to the left of, and slightly above, the umbilicus. An ophthalmoscopic examination was then made, and revealed the following abnormalities: Left eye. Indirect examination. Optic disc normal. When

the child looks to the right a round fawn-colored tubercle, of the apparent diameter of No. 1 shot, is seen close to a retinal vein, and passing across its surface is a tiny offshoot from the vein.

Right eye. Indirect examination. Optic disc normal. When the child looks down three similar fawn-colored tubercles in the choroid are noticed. On the ocular examination I gave an unfavorable prognosis, and verified the parents' suspicion as to the tuberculous nature of the disease. He died a few days after my visit.

IMPORTANCE OF EXAMINATION FOR THE DIPHTHERIA BACILLUS.

In the *British Medical Journal* for January 19th, 1894, Drs. Washbourn and Hopwood, of the London Fever Hospital, cite the following cases as illustrating the importance of examination for the diphtheria bacillus :

CASE 1. A boy was admitted who had sore throat, and within twenty-four hours a perfectly typical scarlet fever rash. On the right tonsil there was a patch of whitish pullaceous exudation, similar to what is commonly met with in the acute stage of scarlet fever. As a matter of routine, an examination of exudate was made. On the next day many typical diphtheritic colonies developed in the tubes. The exudate spread to the opposite tonsil, but soon cleared off both sides. Examinations were repeated at frequent intervals during the patient's stay in the hospital, and diphtheria bacilli found on each occasion. They were still present at time of report, which was six weeks after admission. Well-marked desquamation followed disappearance of the rash.

CASE 2. A boy was admitted with ordinary attack of scarlet fever, accompanied with rhinitis. During convalescence the rhinitis, which had disappeared, returned. There was no other symptom, and the throat was quite healthy. An examination of discharge from nose was made, and virulent diphtheritic bacilli were found.

CASE 3. In one instance diphtheritic bacilli were found in the throat sixty-three days after disappearance of membrane, although the throat had been sprayed with a view to disinfection. Their presence, in spite of spraying, might be accounted for by the fact that the boy had adenoid growths in the pharynx.

CASE 4. The fourth case illustrates a very slight infection, yet undoubtedly diphtheritic. A boy had what was considered coryza, with slight nasal discharge. He quickly recovered, and nothing more was thought of it until diphtheria broke out among his companions. A careful examination of patients three weeks after failed to make out anything abnormal. An examination, however, of secretion from nose revealed diphtheritic bacilli, which were proved to be virulent by inoculation. There was little doubt that the "coryza" was really diphtheria.

CASE 5. A fifth case illustrates the possibility of attendants harboring diphtheritic bacilli, and giving no sign. A nurse, who was in perfect health, was in attendance on cases of diphtheria. A systematic bacteriological examination of her throat was made. Although the throat seemed quite healthy, yet diphtheritic bacilli were found on each of many occasions during six weeks' attendance. The bacilli were of the large variety, and were proved to be virulent. The nurse did not suffer at all in health. Examination of the throat of another official was made on one occasion, and bacilli of the short variety were found. These were not virulent. The throats of four other nurses in attendance upon cases of diphtheria were examined, but with negative results, in so far as diphtheritic bacilli were concerned.

POSITION IN THE TREATMENT OF ELBOW-JOINT FRACTURES.

In Roberts' paper before the American Surgical Association in 1892, it was shown that the majority of surgeons prefer to put up these fractures having the arm flexed at an angle of 90° ; yet that fifteen out of eighty-eight surgeons prefer to fix the arm in an extended position.

The undesirable results of elbow fractures are due usually to one of two things: (1) Limitation of motion; (2) reversal of the normal humero-ulnar angle. Twenty-four experiments were made: Internal condyle fractures, 7; external condyle, 4; transverse fractures across the lower end of humerus, 4; "T" fractures, 4; internal epicondyle, 2; other fractures, 3.

Fracture of internal condyle. Conclusions from experiments: By bringing the forearm into the acute angled position with pressure downward and backward in front of the internal condyle, and with the forearm semi-pronated, the deformity is always reduced, and the fragment is firmly locked in position. In the second experiment it was found very difficult to bring the fragments into position while the forearm was extended. In a third case, when the forearm was extended the fragments were widely separated and dangled loosely; while in a position of acute flexion and semi-pronation the parts came into good position, and were so retained. Similar results in other four cases.

External condyle conclusions. Acute flexion at the elbow serves to replace and retain the fragments as well as it did in the case of internal condyle fracture; while the extended position allows the head of the radius to move forward and to carry the external condyle with it, producing such a result that flexion of the arm is not possible, beyond a limited degree.

Transverse fractures, including "T" fractures, conclusions. The advocates of extension say that the forearm should be put into a position

which is slightly less than full extension. When thus placed the fragments were found to be most loosely held. As in former experiments, the best position for replacement and retention of the fragments was found to be one of acute flexion with semi-pronation.

Fractures of epicondyle, conclusions. Good result, whatever position may be chosen; but fixation was more complete when the forearm was flexed acutely.

Dr. Smith says the following conclusions are justified:

(1) When either condyle of the humerus is broken off into the joint, the fragment remains closely attached to the bone below, whose motion it follows.

(2) The fragment of a fractured condyle can be most securely replaced in its normal position by the following manœuvre: forcible extension followed by pressure on upper end of ulna, downward and forward, while the forearm is being pronated and flexed to an acute angle with the upper arm.

(3) The same manœuvres act equally well in replacing the fragments, if the fracture be of both condyles, a transverse fracture of the lower end of the humerus, or a "T" fracture. (Probably true also of epiphyseal separation.)

(4) In all these fractures involving the joint the fragments are held most firmly in place, *i.e.*, are least susceptible of displacement from forces acting from without, if the elbow is tightly flexed. The next best position in this regard is the position of forced extension (not loose extension), while the greatest mobility is met with in the position of 100° of flexion.

(5) Forced extension in all cases causes a rotation of the fragment forward. A less degree of extension, which will not do this, allows the fragment great freedom of motion.

(6) The essential factors in the locking of the fragments in the acute position seem to be the conoid process in front, and the ligamentous and muscular structures behind. The tendon of the triceps is sufficient, if the posterior ligament is divided, and the ligament is sufficient if the muscle is removed.—*H. L. Smith, in the Boston Medical and Surgical Journal, October 18 and 25, 1894.*

FOR WARTS.

R. Hydrarg bichlor..... gr. v.
 Acid salicyl..... ʒ i.
 Collodii..... ʒ i.

M. S.: Apply every day.—*Coll. and Clin. Rec., Clinique, 1894, vii., 8.*

Editorials.

THE PATRONS' MEDICAL BILL.

WE publish in this issue the admirable letter of Dr. G. Sterling Ryerson, M.P.P., reprinted from a special edition of the *Canadian Medical Review*, respecting the bill to amend the Ontario Medical Act introduced by Mr. Haycock, the Patron leader in the Ontario Legislature, addressed to the President, Council, and members of the College of Physicians and Surgeons of Ontario. We will not try to prove, what is sufficiently evident to all our readers, that such legislation as is proposed would be disastrous both to the public and the profession.

Many think, however, that there is no danger of such an absurd bill passing through the legislature. If any such impression becomes at all general among the members of our profession much harm may ensue. There is very grave danger. No men in our community have so much power in election campaigns as the doctors, especially those practising in country districts. Let them now in a united body make their influence felt. It is not a question of provincial politics. It is not a Government or an Opposition question. Certain men on both sides of politics show some inclination to support the bill. How many we can't tell, but probably far more than most physicians think. A united protest from the profession would defeat it. Let all use their personal influence to the fullest extent.

At a meeting of certain members of the profession in Toronto, March 20th, the following committee was elected to take definite action in the matter: Drs. Adam H. Wright (chairman), N. A. Powell (secretary), C. H. Cook, L. McFarlan, W. J. Greig, Edmund E. King, J. O. Orr, W. H. B. Aikins, G. A. Bingham, and G. Sterling Ryerson. This committee has done considerable work, and communicated with physicians in all parts of the province. We sincerely hope that all will appreciate the importance of the crisis, and act promptly. Petitions should be sent to the government from every township, village, town, and city in Ontario, asking for a rejection of the bill.

Appended to this article will be found a form of petition. Please sign and procure, if possible, not less than two other signatures, and send *at once* to THE CANADIAN PRACTITIONER, 61 Queen Street East, Toronto. If you are not in a position to get other signatures, send the petition with your own name.

THE ONTARIO MEDICAL ASSOCIATION.

WE are requested by the Secretary, Dr. J. N. E. Brown, of Toronto, to state that the next meeting of the Ontario Medical Association will be held in Toronto, June 5th and 6th. The President, Dr. J. W. Bruce Smith, formerly of Seaforth, but now living in Hamilton, and other officers of the society, have already done much in the way of making the preliminary arrangements, and are able to announce that an "excellent programme" is likely to be presented.

The President earnestly asks for the hearty co-operation of members in all sections of the province in a united effort to make the meeting of 1895 the most successful that the association has known. Dr. Smith's ambition is a very laudable one, and we hope that he will meet with nothing like disappointment. His loyalty to the association in the past, his prominent position in the profession, and his active work for many years in medical societies—local, provincial, Canadian, American, and British—would, under any circumstances, give considerable weight to any appeal which he might make to the members of our provincial association; but when he speaks in his official capacity as President, his "call to arms" should strike the rank and file with still greater force.

The work of preparation falls chiefly on two committees, which have already done a large amount of work. The Committee on Papers and Business, under the chairmanship of Dr. N. A. Powell, of Toronto, has received assurances of a very gratifying kind from various quarters, and expects a number of physicians and surgeons from the United States. While, however, we are all believers in free trade and unrestricted reciprocity in medical matters, particularly those referring to the conduct of meetings such as this; still, we attach the greatest possible importance to home products. We hope that there will be a large number of papers presented by members of the association.

The Committee of Arrangements has been organized, under the chairmanship of Dr. James F. W. Ross, of Toronto, and expects to follow nearly the same course as that adopted by the committee of last year. There will probably be a luncheon given by the Toronto members to the outside and visiting members present. We expect to give full particulars in future issues.

PURE MEDICINES.

THERE can scarcely be any doubt that the numerous manufacturers of medicines now in existence are giving us the most reliable and most palatable pharmaceutical preparations that the world has ever seen. It is, of course, a matter of great importance that there should be no

The petition of the undersigned Practitioners of Medicine and others of the town of _____ humbly sheweth :

WHEREFORE, your petitioners humbly pray that your Honorable House may be pleased to reject Bill 96, entitled "An Act to amend the Ontario Medical Act," now before your Honorable Body for consideration, and your petitioners will forever pray.

NAME.	RESIDENCE.	OCCUPATION.

breath of suspicion as to the purity of the materials used by the manufacturers. As our readers are aware, we do not insert what are called "reading notices" for our advertisers, but we think it an act of simple justice to a well-known firm to correct a wrong impression which, to some extent, has gone abroad respecting its preparations. The *Toronto World* recently contained statements to the effect that this company was endeavoring to import a "low grade of alcohol for the manufacture of pharmaceutical preparations intended to be used in the making up of prescriptions."

This was, of course, a very serious, and, indeed, startling charge. We have taken considerable trouble to investigate the matter, and have come to the conclusion that our leading manufacturers of medicines, both in Canada and the United States, use good and pure materials in their factories, and that their preparations are thoroughly reliable. In the particular instance referred to we are convinced that there was positively no foundation for the charge, which grew out of a misunderstanding on the part of the newspaper's correspondent at Ottawa. We are glad to be able to say that the *World*, after enquiring fully into particulars, frankly withdrew the charge. The following excerpt from the *World's* article will explain its present position in the matter, and, at the same time, contains nothing that is not absolutely correct: "As a matter of fact, Parke, Davis & Co. did not at all apply to be allowed to import a low-grade alcohol, as at first indicated, and this point was fully brought out by our correspondent in his despatch of February 27th. The company merely wished to import highly-rectified alcohol for use in manufacturing for foreign markets."

PHYSICIANS IN THE WITNESS BOX.

IT cannot, we fear, be said in a general way that physicians shine very brightly as witnesses in courts of law. In a case where the lawyer and the doctor enter into something like a contest, generally speaking, the doctor comes out a very *bad second*. The law appears to put scarcely any limits on the methods a lawyer may use in his efforts to torture and scarify the doctor who may become in any degree recalcitrant. We don't happen to have much sympathy to waste on the medical witness who shows a strong desire to favor one "side," and, at the same time, to be a little *too smart* for the lawyer.

We have no reference at present to what is known as the medical expert, who has become such an important personage through the development of modern jurisprudence. We refer, rather, to the general practitioner,

who may be called to give evidence in a case where he has examined, perhaps regularly attended, the patient. Take, for instance, an action for damages on account of bodily injuries received. It frequently happens in such suits that a number of doctors are arrayed on each side, and the character of the evidence given sometimes appears to depend on the "side" to which the witness belongs. Perhaps, to make matters worse, there may be also two or three experts attached to each of the hostile camps. We are not going to make any effort (now, at least) to give any advice to the experts. Some of these (as we have them in Canada) conduct themselves admirably, and thus reflect credit on our profession. Others appear to satisfy themselves and their respective "sides" much more fully than they do an impartial audience.

We are, in this connection, more interested in the general practitioner, especially the young one, who desires honestly and conscientiously to tell the "whole truth." This the lawyer does not always want. It may not be his duty or his business to want it. But with that we have nothing to do, excepting to consider therewith the fact that such a conflict of desires must necessarily produce a pronounced lack of sympathy (to put it rather mildly) between the two. In such a case we are anxious to see the physician come through the harrying and worrying ordeal, to which he may be subjected, in a creditable manner. As a rule, fortunately, there need be no great difficulty as far as the medical witness is concerned, if he follows the ordinary rules given by medical jurists, which we may summarize as follows :

- (1) Study your case thoroughly, investigating all the signs and symptoms.
- (2) Obtain a good general knowledge of the subject by reading the views of standard authors.
- (3) Never lose your temper, no matter what the provocation may be.
- (4) Never try to "get back" at the cross-examiner.
- (5) Make your answers as brief as possible ; and, generally speaking, avoid giving reasons or theories unless specially asked for.
- (6) Show no bias towards either side. Try to be as impartial as if you were in the position of the judge.
- (7) Take plenty of time, especially when in doubt as to the nature of the question.

THE INTERNATIONAL MEDICAL CONGRESS.

THE Russian Committee of Arrangements for the next International Medical Congress at Moscow, in 1897, have already completed a large portion of the work assigned to them. We understand they have

not, as yet, decided whether there shall be one or more official languages. The question is being discussed in the medical press of Great Britain and the continent, and widely divergent opinions on the subject are being expressed. There appears to be a general consensus of opinion, however, that, if there is to be only one language, it should not be Russian. We are told by the (London) *Practitioner* that the Russian organizing committee rather favor the idea of adopting French as the one official language. After the last congress at Rome the *British Medical Journal* expressed the opinion that it was a mistake to have had four official languages (English, French, German, and Italian), and that there should have been only one, and that French. The *Practitioner* says that, as a matter of fact, very few Englishmen speak French. This statement is true, and will also apply to the English-speaking people of North America. Occasionally we receive a suggestion that Latin should be made the international language of medicine. If such were done, it would, of course, be the official language of all future international congresses. This, however, is scarcely worth discussing—as it is, in these modern days, with all our modern (be they good or bad) ideas, practically an impossibility. With reference to the next congress, we are inclined to agree with the *Practitioner*, which speaks as follows: "The common-sense solution of the difficulty, as far as the Moscow congress is concerned, is to follow the precedent of Copenhagen, and have three official languages—English, French, and German, the local tongue being excluded as not sufficiently understood by people in general."

Correspondence.

THE PATRONS' BILL.

To the President, Council, and Members of the College of Physicians and Surgeons of Ontario:

GENTLEMEN,—I beg leave to call your earnest attention to a bill to amend the Medical Act which has been introduced in the Ontario Legislature by Mr. Haycock, leader of the Patrons of Industry in that Assembly. I am induced to take the unusual course because of the extreme gravity of the situation, and because the introduction, by laymen, of an amending Act is entirely without precedent, and deserving of the closest scrutiny by the profession whose rights are seriously threatened. The Medical Act, which has been built up for the protection of the public, is threatened with destruction. The bill, if it should come into force, means practically free trade in medicine. It means a retrogression to a state compared with which the condition of the profession, prior to 1850, was order itself. It means that the competition and pressure of to-day will, if this bill becomes law, be redoubled. A calling which has at all times required much self-sacrifice on the part of the practitioners will cease to return an income for the time and labor expended.

Excessive competition is as little in the interest of the public as it is in that of the profession. Indeed, it may fairly be said that the Medical Acts have been framed not for the creation of a close corporation of the profession, but for the protection of the public from the extortions and overcharges of charlatans and empirics, and to guarantee to the people that the men who are licensed to practise medicine are competent to perform their work.

Those who are entitled to registration under this bill. (8) Subject to the provisions of section 24 of the Ontario Medical Act, every person who—

(a) Holds a diploma from any chartered university in the Dominion of Canada, or in Great Britain or Ireland, granting to such person a degree as bachelor of medicine or doctor of medicine, or any similar degree, and who

(b) Has attended the full course of lectures and complied with the requirements of the curriculum of any duly incorporated medical school or

college in the Dominion of Canada, or of any such school or college in the United Kingdom of Great Britain and Ireland, which has been approved by the Lieutenant-Governor in Council, and who

(c) Holds a certificate from the Board of Medical Education, herein after mentioned, of having passed the examination and complied with the regulations prescribed by the said board,

Shall be entitled, upon payment of a fee of \$5 to the Registrar of the College of Physicians and Surgeons of Ontario, to be registered under the Ontario Medical Act. (Rev. Stat., c. 148.)

The bill is essentially a destructive one. Sections 16, 17, 18, 20, 23, 25, 26, 27, 30, 31, 33, 34, 35, 36, 37, 38 of the Revised Statutes, 1887; sections 1, 3, 4, 5, 6, 7, 8 of the Act of 1891, and sections 6 of the Act of 1893, are repealed. Sections 13, 22, 40, 32, 45, and 48 are amended. In fact, there is but little left of the old Acts, that of 1891 being repealed except the last section, which very inoffensively says that the Registrar shall keep the register correctly, and the unimportant second section. The general tenor of the proposed legislation is to take from the Medical Council the powers which it now possesses, to fix the subjects for examination, and to hold examinations, and to hand them over to the Government under the Department of Education. It also proposes to take all fees paid for examination and fund them with the Provincial Treasurer. The chief source of income left to the College is the annual fee of one dollar (instead of two). It is proposed to make this annual amount collectable, in default of payment by the Registrar, in the Division Courts. As it would cost at least five dollars on the average to collect, this is a polite way of cutting the Council's throat. In short, it is attempted to take all real power of examination out of the hands of the profession as represented by the Council. The Board of Examiners is to be called (if this precious bill becomes law) the Board of Medical Education, and is to consist of three members of the Council, one representative of each medical school, two homœopaths, and two members to be appointed by the Government. The chairman and secretary of this board are to be appointed by the Government. All papers are to be approved by the Government—not the Education Department, but the Lieutenant-Governor in Council; that is, the whole Cabinet. Was there ever a more ridiculous proposal? The Board of Education is to decide upon the subjects in which candidates shall be examined, and the fees they are to pay for such examination. The fee for registration is to be five dollars. Persons who possessed a qualification prior to 1870, and who are now entitled to register without examination, will by this Act be deprived of that right. The mode of fixing the tariff of professional fees in the territorial divisions is materially changed. The bill proposes that the Lieutenant-Governor in Council, *i.e.*, the Cab-

inet, shall be the arbiter as to what is or is not a reasonable charge to be made for professional services. The local tariff, while proposed by the divisional association, is no longer to be submitted to the Council. It is presumed that the Cabinet knows more about what a fair charge may be than the men who are in practice. Could folly go further? Fancy medical men fixing the scale of prices for the legal profession! Would it not be equally absurd?

The power of erasure is taken from the Council. In fact, it is really difficult to discover what is left for the Council to do. A body without functions or income is not likely to survive for long. Perhaps this may be the real intent of the bill. Fraudulent advertising, habitual drunkenness, transmission of contagion or infection, violation of the Public Health Act, neglecting to register births and deaths, giving false or blank certificates of the cause of death, conviction in any action for damages for any injury caused, negligence, ignorance, or want of skill, are all and each to be grounds upon conviction of which a practitioner is to have his name erased from the register. The case is to be tried by a judge, who is vested with discretionary powers. But the relator or complainant is not necessarily a medical man. Any one can lay a charge before a magistrate. A man may thus be struck off the register for failing to register a birth if the trial judge so decrees. A man may be subjected to constant annoyance by malicious persons who choose to make charges of violation of the Public Health, or Registration of Births, Marriages, and Deaths Acts. The time of limitation of action for negligence or malpractice is extended from *one* to *two* years.

The last section of this remarkable bill cannot be done justice to by any pen save that of the gentleman responsible for its introduction. Sub-section 3 refers to the penalty for practising without registration, and for falsely pretending. The effect of this sixteenth section, if it becomes law, I leave to my fellow-practitioners to imagine and describe. Efforts will be made to place a copy of the bill in its entirety in the hands of every medical man in Ontario. Here is the section as it appears in Mr. Haycock's bill:

"16. (1) Any person, being a woman, who, within six months after the coming into force of this Act, produces before any local board of health a certificate signed by the head of the municipality, or by two justices of the peace, that she is a person of good character, and who proves by evidence taken on oath before such board that she has successfully performed the office of midwife in at least ten cases of confinement before the passing of this Act, shall be entitled, upon payment of a fee of \$1 to the treasurer of the municipality, to a license, under the hand of the chairman of the board, to practise midwifery in the municipality for two years from the date of such license, and the said board may at the expiration renew such license upon the production of similar evidence of good character."

(2) Any similar license may also be granted to any person, being a woman, who after the passing of this Act applies to the local board of health of any municipality therefor, upon producing a certificate signed by the head of the municipality or by two justices of the peace that she is a person of good character, and proving by evidence taken on oath before such local board and by the certificates of duly registered medical practitioners that she has attended at least ten cases of confinement under the directions and instruction of a duly qualified medical practitioner.

(3) Every person duly licensed under this section shall be exempt from the provisions of sections 45 and 48 of the Ontario Medical Act.

Could professional outcasts and exiles seize a more favorable opportunity to wreak vengeance upon an honorable body? At a time when a set of men whose ignorance is only equalled by their lack of fidelity to the principles they were elected to support, at such a time the enemies of order inspire these men to attack our vested interests, to destroy our time-honored rights. It is for you to say if you will endure these wrongs. If you approve this iniquitous bill, do nothing. If you do not approve, write to the representative of your constituency in the Legislative Assembly to oppose it. Combination must be met by combination. If the Patrons of Industry would destroy the present Medical Act, we must fight for our rights and the public welfare. This matter is urgent and brooks no delay. Organize. Call your territorial associations together. Petition the legislature that the bill do not pass.

G. STERLING RYERSON.

60 College street, Toronto, March 19th, 1895.

MR. GAGE'S GIFT.

To the Editor of THE CANADIAN PRACTITIONER:

DEAR SIR,—Twenty-five thousand dollar gifts for benevolent purposes are not so common in Toronto that the city can afford to ignore another such gift, especially when it is donated for one of the most needed objects of the century—a consumptive hospital; and yet this is practically what the city council has done in reference to Mr. W. J. Gage's gift for a consumptive sanitarium! One would almost think by their actions that the city fathers considered that they were conferring a favor on Mr. Gage by accepting his magnificent donation. It is simply disgraceful the way Mr. Gage has been treated, and the action, or, rather, *inaction*, of the city council is calculated to throw cold water on future acts of benevolence by other wealthy citizens.

Mr. Gage has not only been generous, but he has been wise and far-seeing in his generosity, and it would have been impossible for him to have chosen a more worthy object for his beneficence.

The only condition stipulated in the gift is that the council grant a free site, and this should be done as soon as a suitable site can be found. The city should also give the same amount for its maintenance as is now given for the maintenance of consumptive patients in the General Hospital.

The sub-committee's suggestion to build a consumptive annex to the Home for Incurables is in no way in keeping with modern methods for the prevention and cure of this disease. It should be the duty of physicians to impress on the public and the city council the importance of a special institution for consumptives.

E. HERBERT ADAMS.

Meetings of Medical Societies.

SIMCOE DISTRICT MEDICAL SOCIETY.

THE twelfth regular meeting of this society was held in the council chamber, Orillia, on Wednesday, February 13th, the president, Dr. Howland, of Huntsville, in the chair. The following members were present and took part in the discussions: Drs. Howland and Ross, of Huntsville; Dr. Hanly, of Waubesaushene; Drs. W. A. Ross, Smith, and Arnall, of Barrie; Drs. Alex. Harvie, Jas. N. Harvie, A. E. Ardagh, Ainslie Ardagh, McLean, Herriman, and Shaw, of Orillia; and Dr. Raikes, of Midland.

Dr. Hanly addressed the meeting, thanking the members of the association for their assistance in electing him to represent them in the Ontario Medical Council, and outlining the course he intended to pursue as their representative.

Dr. Ross, of Huntsville, read a carefully-prepared paper on appendicitis, with a history of his own case. After an animated discussion, taken part in by nearly all the members present, Dr. Ross replied.

Dr. N. A. Powell, of Toronto, formerly of Edgar, who was present as the guest of the society, gave a lengthy and most interesting address on the surgical treatment of injuries and disease of the abdominal viscera, explaining the various mechanical appliances which have been recently introduced, and which have so greatly lessened the difficulties of abdominal surgery.

Dr. W. A. Ross, of Barrie, read a paper on cancer, going very fully into the question of operative treatment, and illustrating his conclusions by histories of instructive cases.

After some discussion on a motion of the secretary's to change one of the by-laws, which was carried, the meeting adjourned to partake of a most enjoyable supper provided by the Orillia members of the association.

R. RAIKES, M.D.,
Secretary.

TORONTO MEDICAL SOCIETY.

THE regular meeting of the above society was held on the evening of Thursday, February 28th, Dr. Peters in the chair.

SARCOMA OF THE KIDNEY.

Dr. Peters showed a specimen of sarcoma of the kidney, taken from a child, a history of which he gave at the last meeting. The child died from an attack of pneumonia. He pointed out that the remaining kidney was hypertrophied. The smallness of the vessels of the pedicle were also pointed out. There was also a clot to be seen in the internal iliac, which had, he believed, formed during the act of dying. Collateral circulation must have been established, for there was no sign of interference of disturbance of the circulation in the leg on that side. Another post-mortem feature of the case was that the cæcum was found down in the pelvis. The pharynx was also shown. At the time of the dissection it could be plainly seen that this structure was ulcerated. This was, of course, the result of the diphtheritic attack.

Dr. Primrose said that it was a point worth noting—the smallness of the vessels running to the tumor. He was not aware that this condition had been referred to in the text-books. This was a point of importance in dealing with the pedicle. The point was the more interesting when it was considered that these growths were exceedingly vascular themselves. However, the blood-stream through them might, like in the liver, run slowly.

Dr. Williams asked if the death were due to the pneumonia or septicæmia. Was the clot spoken of septic?

Dr. Peters said that he did not consider that the clot was septic. He thought the pneumonia was the cause of the death. In referring to Dr. Primrose's remarks, he said that one could not draw conclusions merely from the observation of two cases with regard to the size of the vessels.

MESENTERY.

Dr. Primrose showed photographs of a mesentery he had found in a dissecting-room subject, in which the primitive condition had persisted. He illustrated, by means of charts, the various stages in the development, and the position of the alimentary canal and the peritoneum.

Dr. Wishart said that he had not observed the condition in his dissections. He had seen one case where the mesentery for the descending colon was very complete.

TUBERCULOSIS OF THE ELBOW.

Dr. B. E. Mackenzie showed an arm that he had removed for tuberculosis of the elbow. The family history was good. It commenced about

six years previously from an injury. From some successive injuries the inflammatory action was renewed after some recovery. The patient reported that a Leipsic physician treated it by injecting something into it. Some improvement followed. Dr. Mackenzie treated it first by using a plaster Paris splint, which afforded considerable relief. But as the condition persisted, the patient expressed a desire to have something more radical done. The decision was to do an excision if, after examination, that was considered to be sufficient, but amputation if there were any doubt. Amputation was done. The subsequent history was very satisfactory.

The second specimen was that of a leg from a boy who gave a bad family history, and a bad personal history as regards tuberculosis. The plaster paris was resorted to in the commencement of the attack, but, in spite of treatment, sinuses formed. These were curetted, and the wounds dressed with iodoform gauze. He got along tolerably for a time, but finally became so bad that amputation was resorted to. Not only the knee-joint, but the shaft of the femur, up as high as the upper third, where amputation was done, was affected. There was marked muscular atrophy in this second case, which was not a feature of the first.

Dr. Primrose pointed out that it was often difficult to know what to do in these cases—whether to excise or to amputate, and, if amputation were decided upon, how high up to go. There was a difference between inflamed bone and diseased bone, and in operating one could not be sure of always going above the diseased portion.

Dr. Cameron pointed out that in these cases of tubercular arthritis, although the cancellous portion of the bone might be affected, it did not usually pass beyond the epiphyseal end; but there frequently was an affection of the medullary canal that might be termed peri-tubercular. Under these circumstances, one might operate nearer to the disease than would appear from the medullary cavity alone, provided one could get a healthy covering for the end of the bone.

Dr. Peters pointed out the very marked difference which existed between the two specimens—in the arm the shaft appearing perfectly healthy, in the leg there being marked atrophy of the compact tissue. He pointed out that the amount of disease in the knee that would justify amputation would perhaps only justify excision in the elbow.

Dr. Wishart presented some frozen sections, and pointed out some very interesting anatomical features in connection therewith. The relations of the various organs and structures were very beautifully shown. The members spent some time in examining them.

Dr. W. Oldright detailed the remaining history of a case he had reported at a previous meeting of spina bifida. He had treated the patient

by injecting Morton's fluid. The treatment was not successful, and the child died. He removed the tumor, post mortem, and presented it for examination.

Dr. H. H. Oldright pointed out the various features he had observed in its structure.

Regular meeting, Thursday, March 7.

President Dr. Geo. A. Peters in the chair.

DISLOCATED KIDNEY.

Dr. W. J. Wilson, of Richmond Hill, reported a case in practice. It was that of a woman who, while engaged in hanging out a washing, slipped, dislocating the right kidney. It could be palpated easily, and was swollen and tender. In the urine were blood cells, pus cells, and different varieties of epithelium. After rest in bed for a few days, the symptoms disappeared, and she gradually recovered her usual health. He had not heard of these cases being detected so soon after the accident.

Dr. W. J. Gregg described the method of reducing a dislocated kidney, and the method of holding it in place afterwards. The swelling and congestion could be explained by a twisting of the pedicle.

Dr. Wilson said his experience was that these movable kidneys were very difficult to hold in position with the hand. He could hardly see how a belt and pad would do so.

Dr. Carveth detailed a case in which the element of sepsis was present. The woman had had pains and digestive disturbances for six months, and the kidney was freely movable. He could not account for the septic symptoms. The temperature had been ranging between 99° and 103° for the past seven weeks. No bandage would keep the kidney in place. He had found the same condition of the urine as Dr. Wilson had described, but upon using a catheter to withdraw it he discovered nothing foreign.

Dr. Peters reported a case that had been referred to him for operation; but as the kidney was not movable more than those of the first degree as described by Erichsen, he did not operate. The only symptom was pain when the patient moved about. He had a belt and rubber pad applied.

DYSMENORRHOEA.

Dr. A. A. Macdonald then read a paper on dysmenorrhœa. He pointed out that while little advancement had been made in regard to the classification of the causes of this trouble, that was not the case as regards treatment. He described the various symptoms of the various forms, and the treatment he had found useful therein. For the neuralgic form, he used rest and warmth, with local heat. Chloral, bromide, hyoscyamus, phenacetin, antipyrin, and cannabis indica were all useful in this form. The

cannabis indica should be shoved. Much care should be used in the giving of whiskey or morphine. Much could be done in a constitutional way during the inter-menstrual periods. Constipation, which was a usual accompaniment, should be overcome, and all the secretions made to act freely.

The congestive form was next referred to. In some cases scarification was advisable ; sedatives were also of benefit.

The general system was to be looked after. Tamponade with glycerine and belladonna were recommended.

In the membranous form dilatation and curettage were advised.

The constant current was also advocated.

In the mechanical form the cause should be ascertained, and the cause removed. He alluded to the difficulty of treating this form in unmarried ladies.

The essayist then showed various dilators, and pointed out their particular merits.

Dr. Wilson spoke of the value he had found from acting freely upon the liver in the congestive variety. Hammamelis and hydrastis had given satisfaction in his hands.

Dr. Webster asked what relation should the time of treatment bear to the menstrual periods.

Dr. MacMahon spoke of a case where he proposed to operate for its relief, but discovering that the woman had a marked mitral stenosis, and fearing the effects of pregnancy on this condition of the heart, desisted from interfering.

Dr. Macdonald said that he would not commence active treatment interference until a few days after the flow, and would not treat within a day or two before the flow. He would not, he thought, have been as afraid of treatment as Dr. MacMahon, since he had had a number of such cases who had done all very well, and stood the strain of pregnancy without much danger or discomfort. In reply to a question by Dr. A. F. Mackenzie, he said that the dose of cannabis indica varied. About fifteen minims of the tincture three or four times a day was an average dose.

APPENDICITIS WITH PERINEPHRAL ABSCESS.

Dr. Atherton then read the history of a case of appendicitis with perinephral abscess. The history of the case pointed to appendicitis, the non-operative treatment being followed in the first instance of the attack.

On January 17th there was more or less discomfort in the right loin. There was some gurgling over the cæcum. Temperature 100°. February 3rd there was a half-ounce of pus discharged in the stools. Did fairly well for a short time.

February 5th, temperature 101°. Signs of some serious trouble began. This was two months after the commencement of the illness. On operating, the appendix was found buried in a mass of fibrinous material. It was ligatured and removed. Two faecal concretions were in it. Stump was treated with carbolic acid. There was thickening and induration of the tissues behind the caecum. Iodoform gauze was introduced and an end left as a drain. The evening following the operation there were signs of improvement, but in a few hours after symptoms of collapse presented themselves, and the patient died.

Post-mortem showed the intestines adherent, and other general signs of peritoneal infection. The most important feature was the presence of an abscess around the right kidney.

Dr. Atherton maintained that the abscess was due to the appendical trouble, and would not have occurred if operation had been done early. He was unable to make anything abnormal out in that region at the time of the operation; it was probably hidden by the thickening referred to before. He believed more and more in the necessity of early interference in these cases.

Dr. Greig detailed the history of a case. The patient was a boy 12 years old, whose urine was found to be putrid, markedly alkaline, full of mucus and pus. There was no frequency of micturition, no increase in the amount of urine, and no stone present. There were no symptoms of pain or discomfort. There might be a condition of atrophy. Washing out with boracic acid and bichloride had done little good.

Dr. Macdonald said he thought it was a case of chronic cystitis, and recommended washing out with stronger solutions, and oftener.

Dr. Atherton suggested that there might be encysted stone.

Dr. Wilson thought it wise to get rid of the residual urine.

Dr. Peters suggested median cystotomy and drainage if it baffled the ordinary treatment. He described his method of washing out the bladder.

Dr. Cameron said that as the bladder was an abdominal organ in children, the suprapubic method of drainage would be preferable to the lower method.

Dr. Gregg closed the discussion.

The meeting then adjourned.

Book Reviews.

OBSTETRIC SURGERY. By Egbert H. Grandin, M.D., Obstetric Surgeon to the New York Maternity Hospital, Gynæcologist to the French Hospital, etc.; and George W. Jarman, M.D., Obstetric Surgeon to the New York Maternity Hospital, Gynæcologist to the Cancer Hospital, etc. ; with eighty-five (85) illustrations in the text and fifteen full-page photographic plates. Royal octavo, 220 pages. Extra cloth, \$2.50, net. Philadelphia : The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

The authors correctly claim that the keynote of this volume is election in obstetric surgery. The importance of intelligent election and careful preparation in respect to obstetric operations is more fully realized now than it ever was in the past, and the tone of the work in this particular is all that could be desired. The general style of writing is exceedingly dogmatic, and is, perhaps, better for teaching purposes on that account. Those who adopt such a style, however, in speaking to the profession, instead of their undergraduate classes, ought to be particularly strong as authorities, and very careful to avoid inaccuracies. Our authors may be sufficiently strong, but they are certainly not always accurate. The book taken altogether, however, is very readable, and contains much that is excellent, expressed in a crisp, practical way that is sure to leave its impression.

The directions as to asepsis and antisepsis are excellent ; and though there is considerable repetition in connection with the descriptions of various operations, we think they are none the less valuable on that account. The chapter on obstetric dystocia and its determination is very good. It is very well shown that minor deviations from the normal pelvis are more difficult to discover than those that are gross. One might possibly wonder what the authors mean by the word, conjugate : it is certainly not correct to apply the term (meaning, as it does, the small axis of an ellipse) to the antero-posterior diameters of the cavity and outlet. Perhaps the authors do not mean exactly what they say in the following words : "The corollary is that in case of abnormal pelvis the aim of the attendant should be to guide the longest diameters of the foetal head into the longest diameters of the pelvic canal." The rules relating to artificial abortion, particularly in cases of pulmonary cardiac and renal disease, are rather vague. The operation is, from many points of view, so decidedly objectionable, that one should be exceedingly careful in recommending it to the profession. In speaking of renal disease, we find the following : "In a given case, if under absolute milk diet and the administration of iron and diuretics, the amount of albumin in the urine do not decrease, artificial abortion should be resorted to." The authors should recog-

nize the fact that this is not universally accepted as the correct way to treat the albuminuria of pregnancy due to nephritis. This plan of treatment was discarded some years ago in the Burnside Lying-in Hospital, of Toronto, because it was thought that the administration of iron and diuretics did more harm than good in the majority of such cases, and that a modified milk diet was quite as good as the absolute. We have no decided objection to the operation for the induction of abortion as described by our authors, but we think that the dilatation of the cervical canal to the extent of "an inch and a half to two inches," as recommended, is not always quite safe. In any case, the simple method of inducing abortion by puncturing the membranes with a uterine sound should not be entirely ignored in such a work as this. The description of Pelzer's method of inducing premature labor by injections of glycerine is inaccurate, and would favor the injection of air into the uterus—the very thing the authors caution us against.

The directions as to the application of the forceps are generally good ; but what means the following? "Carcinoma of the cervix, inasmuch as the cervix is rendered so pliable, is a contraindication to the application of forceps." The chapter treating of version is exceptionally good. The descriptions of the major operations and the considerations for election are excellent, as a rule ; but the description of symphysiotomy might be a little more definite, especially in regard to the two recognized methods—the subcutaneous and the open. The closing chapters on the surgery of the puerperium call for nothing in the shape of adverse criticism.

Upon the whole, this is a good book. The good features far overbalance the deficiencies, to which we have given, perhaps, too much prominence. The authors have shown considerable originality and force, but, taken altogether, there is evidence of too much haste in mixing up in a heap a lot of good things. A little less individuality, some slight recognition of the fact that there are other obstetricians alive in the universe, a correction of some errors in details, a little *touching up* of the English here and there, and some commonplace proofreading, would considerably improve the next edition.

Medical Items.

DR. CHARLES BIRD has located in Barrie.

DR. A. S. THOMPSON, of Strathroy, has been appointed coroner for East Middlesex.

DR. D. A. MCCRIMMON, of Underwood, has removed to Ripley, where he will practise in the future.

DR. K. N. FENWICK, of Kingston, has presented to the General Hospital of that city the sum of \$2,500, to be expended on the construction of an operating theatre.

DR. R. M. STEPHEN, of Manitowaning, has been appointed medical attendant of the Indians of Manitoulin Island and the north shores of Lakes Huron and Superior.

DR. ACKLAND ORONHYATEKHA, who has been taking a post-graduate course in Europe during the past year, paid a visit to his friends in February, but has returned to complete his course. He will likely remain abroad another year.

DR. L. M. SWEETNAM, of Toronto, returned to his home March 2nd, after his stay of several weeks in Baltimore. He went away partly for a rest, but he spent most of his *resting hours* in Johns Hopkins Hospital, which was for him apparently a good place to recuperate, as he has come back full of health and vigor.

OBITUARY.

THE name of the medical student in Trinity Medical College who died, February 14th, was Mr. T. H. Pearce. In our last issue there was an error in our announcement of the death.

JOHN WHITAKER HULKE, F.R.S.—Mr. Hulke, President of the Royal College of Surgeons of England, and senior surgeon to the Middlesex Hospital London, died, February 19th, after a short illness, from influenza, complicated by broncho-pneumonia.

DR. CLARKSON FREEMAN.—Dr. Freeman, of Milton, was engaged in active practice for about forty years. He graduated in the University of Toronto in 1853. Although a busy practitioner he always took an active interest in local politics and educational matters, and was highly esteemed by all classes. He enjoyed fairly good health during the winter, and appeared to be well and in good spirits on March 1st, when he was suddenly seized with vomiting, and died in a few minutes.

DR. GEORGE DEAN MORTON.—Many years ago Dr. Morton was one of the best known and most successful physicians in North York and neighboring

counties. He received his license to practise medicine from the old Medical Board in 1852, and settled in Holland Landing, where he remained about four years. He went to Bradford in 1856, and was there engaged in a very large practice until 1881, when he retired from active practice and removed to Toronto, where he lived up to the time of his death. He died at his residence, 563 Church street, February 17th, at the age of 73. He was very highly esteemed by a large circle of acquaintances and friends, who, one and all, entertained a high respect for his ability, his honor, and his integrity.

GEORGE WRIGHT, M.A., M.B.

Dr. George Wright was for many years a prominent and well-known physician of Toronto. He was a graduate in Arts of Victoria University (1862), and in Medicine of the University of Toronto (1867). After completing his medical course he settled in Toronto, and in a few years acquired a good reputation and a large practice. He was also well known as a prominent Conservative, and would probably have been one of Toronto's representatives in parliament if he had agreed to accept a nomination for the western division. He was a large, handsome man with good presence, and a remarkably fluent and eloquent speaker. His marked abilities brought him speedily to the front in all organizations with which he was connected. He was for many years a member of the Public School Board, and at one time its chairman. He took a deep and active interest in the formation of the Toronto Public Library, and was for a time a member of the board. He was for many years an enthusiastic Oddfellow, and was greatly respected by his fellow-members in Toronto, and was highly honored at various meetings of the Grand Lodge, of Ontario of which he was elected Grand Master in 1873. He was a member of the corporation of the Toronto School of Medicine, and a member of its teaching staff for many years, both in the school and at the Toronto General Hospital, where he was a visiting physician. When the Medical Faculty was established in the University of Toronto in 1887, he was appointed one of the lecturers in medicine. It unfortunately happened, however, about this time that his health became poor. He had an attack of diphtheria, which left profound debility from which he never properly recovered. His bronchitis, from which he suffered to some extent from boyhood, grew worse, and was complicated by asthma and dilatation of the heart. It was thought by himself, and the physicians who attended him, that a change of residence might cause an improvement in health; and in consequence he went to California with his family in 1888, and remained there until the time of his death. The change of climate, unfortunately, did no good, as he did not recover his strength in any way. He suffered much for many years, especially from the asthma, and at many times was confined to his bed for weeks at a time. The heart disease is said to have been the immediate cause of his death, which occurred, March 17th, at his home in Redlands, a small village near Los Angeles, California. A widow and one son survive. He was 57 years of age. The genial, jovial, big-hearted man; the scholarly, eloquent, and sometimes fiery speaker and debater; the kindly and loving physician; the true and generous friend—George Wright that was before bodily ailments wrecked him physically—will long be remembered by his numerous friends of olden times.

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EDITOR:

ADAM H. WRIGHT, B.A., M.D. Tor.

ASSOCIATE EDITORS:

JAMES F. W. ROSS, M.D. Tor.

JOHN CAVEN, B.A., M.D. Tor.

EDMUND E. KING, M.D. Tor.

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Original Communications.

REPORT OF ONE HUNDRED AND FORTY-FIVE OPERATIONS DONE FOR REMOVAL OF OVARIAN TUMORS AND PATHOLOGICAL CONDITIONS ASSOCIATED WITH THE OVARIES AND UTERINE APPENDAGES ONLY.*

BY A. VANDER VEER, M.D.,

Professor of Didactic, Abdominal, and Clinical Surgery,
ALBANY, N.Y.

IN presenting this report in abdominal surgery, with accompanying table, I desire to state that the one hundred and forty-five cases do not include any of my work in supravaginal hysterectomy, excepting Nos. 112 and 114, cases complicated with ovarian tumors, or solid tumors of the ovaries or broad ligaments, cases of hystero-epilepsy, cases of tuber-

*An abstract of this paper was read at the meeting of the American Association of Obstetricians and Gynecologists, Toronto, Canada, September 19th, 1894.

cular peritonitis, of gall-bladder surgery, of appendicitis ; or of any operations whatever within the peritoneal cavity, previously reported by myself in former papers, with one exception, case 42. The operations here reported were done for removal of ovarian tumors and pathological conditions associated with the ovaries and uterine appendages. It is true that some of the cases were simple tubercular peritonitis, in which the appendages were not removed, but the history of the case, in each instance, and direct physical examination, gave some little question as to whether there might not be an ovarian complication with the suspected tubercular trouble.

I realize that my work is far from being as successful as I could have wished, and yet, in a personal, critical retrospection of the causes of death, I feel that I have gathered an experience that will be to the benefit of my future patients, and I trust somewhat to those of my associates and successors who may continue to do this line of work.

CASE 1. Mrs. C. C., duration disease two years ; history of several attacks localized peritonitis, accompanied by vomiting.

Operation February 20, 1888, revealed multilocular ovarian cyst, papillomatous in character ; some adhesions ; broad pedicle ; Tait knot. Patient did well for forty-eight hours, then began to vomit, showing marked evidence of intestinal obstruction, which continued unrelieved. Died on third day. Autopsy revealed obstruction due to loop of small intestine having attached itself to stump of pedicle.

CASE 3. Mrs. F. C., operation April 9, 1888, revealed multilocular ovarian cyst, with sarcoma of mesentery—latter ligated separately and removed. Uterine appendages also removed. Drainage. Patient in good condition of health six months after operation.

CASE 4. Miss C. D., maternal grandmother died of cancer. Menstruated at fourteen ; scanty and painful ; severe amenorrhœa and dysmenorrhœa since. Four years previous, after a severe fall and cold, had pelvic peritonitis. Leucorrhœa always very severe. Suffered from general pelvic pain, and unable to perform household duties, much of the time being a confirmed invalid. Operation May 31, 1888, showed adhesions quite marked, right ovary enlarged, and tube much thickened, left ovary undergoing cystic degeneration, tube not so much diseased as right one. Stitch-hole abscess on sixth day. Finally good union, patient discharged on twenty-fourth day after operation.

CASE 6. Mrs. A. M., mother, two paternal and two maternal aunts died of phthisis ; maternal cousin had abdominal tumor. Personal history very good. Married at sixteen ; two children ; one miscarriage ; youngest child twenty-eight years old. Seven years previous to operation noticed some trouble in left iliac region ; dull pain, and soon after side

began to enlarge. Five years later menstrual periods became irregular, and later still legs became œdematous. Examination urine showed no disease of kidneys. Abdomen measured forty-two inches in circumference about umbilicus. Operation May 31, 1888. No adhesions. Weight of cyst and fluid thirty-five pounds. Patient in much pain after operation, and given one-quarter grain morphia, hypodermatically, every six hours for first day, after which it was discontinued. Bowels moved second day; superficial stitches removed fourth day; deep ones fifth day; wound healed by primary union. Without any assignable cause temperature third day rose to $102\frac{1}{2}^{\circ}$, within few hours returning to nearly normal, after which patient made uninterrupted recovery, and discharged on twenty-third day.

CASE 7. Mrs. A. O'C., family history good. Never had severe illness; menstruated at twelve, which was and always has been painful, but normal in quantity and general appearance. During September, 1887, first noticed pain and tenderness in right iliac region. Pain dull, burning variety, and seemed to extend gradually upwards. Four months later noticed enlargement left side, gradually increasing in size, patient measuring thirty-four inches in circumference. Two weeks previous to operation had severe, paroxysmal pain in left inguinal region, especially severe upon deep inspiration—continuing for ten days. Menstrual periods regular during growth of tumor and less painful than before. Bowels habitually constipated, except two weeks previous to operation. Operation May 31, 1888, revealed large, multilocular ovarian cyst, connected with left ovary and tube, having many adhesions to bladder and intestines, which were relieved without great difficulty by means of pressure of hot sponge, proving them to be of recent origin, probably outgrowth of recent peritonitis. To deliver cyst required breaking up of very many smaller cysts through original opening in larger cyst. Right ovary undergoing cystic degeneration and removed. Abdomen thoroughly flushed with hot water. Weight cyst and fluid twenty pounds. Fluid thick and gelatinous, and portions escaping into abdominal cavity made irrigation necessary. Patient given few hypodermic injections of morphia first twenty-four hours to relieve pain. Superficial stitches removed third day, deep on fifth, wound thoroughly healed. Evening eighth day, after evacuation bowels, patient had severe chill, followed by temperature 102° , with profuse sweating. No abdominal tenderness, but hard, indurated mass could be felt about lower end incision. Warm applications used, and five-grain doses quinine given every four hours. On evening of tenth day about one ounce of black, tarry, foetid substance discharged per vaginam, vaginal douches being used after that each day. Temperature fluctuated between 102° and $104\frac{4}{5}^{\circ}$ for thirty-six hours, but decreased on eleventh day, and on twelfth normal—

no suppuration of wound. Indurated mass in region incision entirely disappeared, and from this time on patient made an uninterrupted recovery, being discharged on twenty-fourth day.

CASE 8. Mrs. P. A. R., paternal grandfather died of cancer; paternal aunt of phthisis pulmonalis, otherwise family history good. Menstruated at thirteen, regular up to fifty-two, except during pregnancy and when nursing children. Two children; two miscarriages. Patient first noticed small enlargement left side abdomen two years previous to operation, painless and increased in size very slowly until April, 1888, when it grew rapidly and became somewhat painful; much inconvenience in getting about; circumference at navel forty-one and one-half inches. Operation July 5, 1888, revealed double ovarian cyst; right nearly unilocular, tapped, removed without much difficulty, although some adhesions to intestines. Cyst left ovary adherent to omentum, giving rise to considerable hæmorrhage, requiring several ligatures; weight, cysts and fluid, forty-two pounds. Patient had quite severe mitral stenosis, but bore anæsthetic very well. Stitches removed fifth day; patient made good recovery and discharged on twenty-first day.

CASE 9. Miss E. B., family history very good. Patient suffered many attacks of pelvic peritonitis. Operation October 1, 1888, revealed double pyosalpinx; many and firm adhesions; operation very difficult; removal uterine appendages. Good recovery. Two years later patient died from what, at that time, was supposed to be sarcoma of cavity of pelvis.

CASE 10. Miss M. W., æt. 20, good family history. Unilocular cyst; uncompleted operation. After operation no symptoms presented to cause anxiety, except as to pulse rate, not going below 100, tenth day increasing in frequency, and patient showed a nervous, agitated state, although bowels had moved properly, etc., but she gradually sank and died on fourteenth day. Autopsy revealed large number of clots in pelvis, same condition had extended up into abdominal cavity, particularly in right lumbar region, clots undergoing septic change, but no pus present; ligature was found loosened and discovered to have come from stock of imperfectly prepared silk, none of it being used afterwards. In this case I believe had there been no internal hæmorrhage, or, when it presented, had I opened up, washed out, thoroughly controlled bleeding vessels and drained, she might have recovered; yet at no time was there shock enough to indicate this procedure warrantable.

CASE 11. Mrs. C. W., family history of phthisis. No children; one miscarriage, 1880. Regular menstruation until August 4, 1888, when it ceased. May, 1888, after hard day's work, taken with severe pain, crest right ilium, lasting fifteen hours; enlargement presented afterward. Diagnosis of ovarian tumor; tumor enlarged rapidly—tapped October, 1888;

patient afterward suffered from occasional attacks biliary colic and swelling of right leg. Operation, November 19, 1888, revealed large multilocular cyst, from left ovary, containing variety of colored fluids, ranging from light to dark, dirty greenish appearance. Cyst contained papillomatous growth; right ovary healthy, not removed. Operation protracted, as hard, solid portions of tumor rested over right kidney and iliac vessels, undoubtedly from pressure, causing swelling of leg on that side; drainage for about forty-eight hours. Excellent recovery, and patient discharged twenty-second day.

CASE 12. Mrs. H. T. T., family history decidedly cancerous. Four children; one miscarriage, seventh month. Menstruation normal. After birth second child, solid tumor, size of cocoanut, developed in left lumbar region, disappeared under treatment, appearing again at birth of third child, disappearing after delivery; patient at this time very ill; constant vomiting for a week, with suppression of urine; however, made very good recovery. No trouble fourth pregnancy; at fifth, had post-partum hæmorrhage. Three years previous to operation began to enlarge slowly for eight months, when on rising one morning growth had disappeared, doing this several times since. About that time tapped twice, at intervals of a week. Operation, December 21, 1888, revealed tumor springing from left ovary, cyst holding twelve quarts of fluid. Many adhesions. Operation difficult. Several silk ligatures applied within abdominal cavity. Right ovary also removed. Uninterrupted recovery, discharged on twentieth day.

CASE 13. Mrs. H. M. R., family history of phthisis. Six years previous to operation delivered of stillborn child. Health not good since. Menstruation regular, but always painful. Took fifteen to twenty grains chloral nightly. Three years previous to operation treated fifteen weeks by Dr. Emmett, in Woman's Hospital, for ovarian trouble and ante-version. After return home husband continued use of tampons, cotton, and glycerine, but no improvement, and patient confined to bed four months. Diagnosis, double salpingitis, confirmed by operation December 22, 1888. Some vomiting and continued pain in back after operation, otherwise good recovery, and discharged thirtieth day.

CASE 15. Mrs. N. M., family history good. Menstruation normal. One child, three years old; one miscarriage. First noticed distension of abdomen one year previous to operation, and was treated for ovarian dropsy and lung trouble by Dr. Woodward, of Vermont, for some time. Operation revealed ascitic fluid, peritoneum studded with small papillæ, giving somewhat the appearance of warts on a toad's back. Condition concluded to be one of tubercular peritonitis. Right ovary enlarged and removed. Masses afterwards proved to be tubercular in character. Glass drainage, which gave her much discomfort, was removed on fourth day and

replaced by soft rubber tube. This removed on twelfth day, drainage having ceased entirely. Patient made an uninterrupted recovery and remained in good condition afterwards. One point of interest presented in her case, *i.e.*, regarding glass drainage tube not being turned and raised each day by the nurse, its becoming quite firmly attached in position and removed with some difficulty. Patient discharged on twentieth day.

CASE 16. Miss I. R., æt. 26. Family history only fairly good. Suffered from dysmenorrhœa, and severe, well-marked attacks pelvic peritonitis. Feeble and emaciated when I saw her with family physician, with great effort continuing her work, that of bookkeeper in large store. Had continued indigestion with vomiting. Case evidently one of salpingitis, and probably double pyosalpinx. Cœliotomy April 5, 1889. Many firm adhesions, difficult to separate, but removal appendages completed. Pelvis left in good dry condition. Patient vomited from time of operation, at last a spinach-like substance. No distension abdomen; bowels moved safely, no symptoms obstruction, but patient died from inanition on eleventh day. Autopsy showed evidence general peritonitis. Careful going over of technique of operation and surroundings failed to show any evidence of error.

CASE 19. Mrs. F. W., family history good. Menstruated at fourteen; married at fifteen; fourteen months later delivered of living child at seventh month; premature delivery caused by boy jumping on abdomen; second delivery normal and child still living; one miscarriage since at third month; menopause at forty-eight. October, 1888, operated on by Dr. Boyd for prolapse of uterus; no evidence of tumor at that time; thinks growth since to have been occasioned by resting filled coal scuttle upon left ovary at times for past six years. December, 1888, observed aching pain in this region; some bloating, and felt ill all winter; blisters and hot applications used; first noticed enlargement, size of goose egg, in February, 1889; examination in May gave all the symptoms of ovarian cyst. Operation June 15, 1889; diagnosis confirmed; cyst removed; quite a number of adhesions; drainage; recovery, followed by hernia some six months afterwards.

CASE 20. Mrs. B.A., æt. 22, family history of phthisis. Met with injury May, 1888; following October abdomen enlarged; tapped April 18, 1889, fifty pounds of fluid drawn; circumference at umbilicus, forty-four inches; though desperately ill, yet she and her friends were very anxious for an operation. Cœliotomy August 22, 1889; time required, one hour and thirteen minutes; very extensive and firm adhesions of sac to peritoneum; much hæmorrhage; multilocular cyst, left ovary removed; right ovary enlarged, with evidence of another cyst developing, also removed; glass drainage; every effort made to bring patient out from condition of shock,

but she died at 4 p.m., August 30. Autopsy revealed no hæmorrhage within peritoneal cavity. Case probably hopeless from beginning, and illustrates the seriousness of delay and evil results of tapping.

CASE 21. Mrs. E. B., widow, aunt died of cancer of tongue, otherwise history good. Menstruated at sixteen; regular, without pain; married at seventeen; three children; two miscarriages; menopause at forty. One year previous to operation abdomen began to enlarge, and gave some distress on motion. January, 1889, could feel good-sized tumor in left side, which she could steady with hand when turning in bed. March, 1889, tumor tapped, but no fluid withdrawn. Six weeks previous to operation tumor grew more rapidly. Twelve days before operation Dr. Fuller aspirated left side and drew off small quantity of what seemed to be purulent fluid. Weighed 135 pounds year before operation. Emaciated, anæmic, bowels regular, appetite very good, urine scanty, pulse 128, temperature 99°, measured 47 inches about navel. Diagnosis, multilocular ovarian cyst. Operation September 23, 1889; diagnosis confirmed; scarcely any adhesions; large cyst filled with colloid material; ovaries removed; drainage; patient making good recovery.

CASE 22. Mrs. C. L., family history of phthisis; mother of three children; one miscarriage; strong and healthy as a girl; menopause at forty-five. March, 1889, after very hard work, noticed enlargement left side abdomen; filled rapidly and tapped in July; one-half gallon fluid removed; tapped again August 16, nearly same amount fluid. First tapping fluid had bloody appearance, second purulent. Had attack of what was called bilious vomiting September 28. Appetite good, bowels inclined to diarrhoea; legs enormously swollen, at times discharging serum. Operation October 14, 1889; adhesions of sac to peritoneum very decided. When trocar was introduced there escaped a greenish-looking fluid. Introduction of hand into opening of sac became necessary, and a material looking like custard or omelette was scooped out; sac carefully separated from peritoneum, such vessels ligated as became necessary, peritoneal cavity irrigated with hot water, drainage tube inserted, and incision closed; patient vomited almost constantly for first forty-eight hours, finally ceased; drainage quite free, glass tube removed end fifth day, rubber substituted, left in but few days longer; patient made excellent recovery.

CASE 24. Mrs. M. B., patient has three living children, youngest eleven years old. Menstruation regular from fourteen up to forty-three, when she flowed every two or three weeks. In December, 1888, first noticed slight enlargement on left side; during last six months has enlarged more rapidly, pelvic cavity free from deposits; uterus freely movable. Operation October 29, 1889; ovarian cyst tapped and mucilaginous dark-

colored fluid drawn off. Several adhesions found on left side; as sac was drawn out it was found to be multilocular; sac lifted out *en masse* and small pedicle ligated; patient recovered rapidly.

CASE 25. Mrs. R. H., family history good. Menstruated at fourteen; two children, no miscarriages; youngest child ten and oldest eighteen years old; since birth of first child suffered from pelvic pain, especially severe at menstrual epoch; pain feels as if bands were being tightened around the intestines. Not free from pain for eighteen years. Operation March 4, 1889, showed both ovaries bound down by strong adhesions; nothing further done than to loosen adhesions as much as possible; impossible to isolate ovaries; abdominal wound sutured in usual manner, glass drainage; patient made good recovery.

CASE 27. Mrs. D. S., mistaken diagnosis; supposed large ovarian cyst. Cœliotomy November 14, 1889, revealed tubercular peritonitis; ascites; one ovary removed; improved; patient died later on of return of peritoneal dropsy.

CASE 28. Mrs. S. N., menstruated at eleven. Not regular. Flow would cease for seven weeks or two months. Has five children. Three miscarriages. Youngest child three years old. Two years ago noticed enlargement in right ovarian region. April, 1889, began to flow excessively, and on one occasion flowed steadily for two months. Enlargement gradually increased. Operation December 5, 1889. Ovarian tumor. Chill on fourth day, controlled by quinine. Cyst fluid twenty-two pounds. Uninterrupted recovery.

CASE 29. Mrs. H. N., family history good; delicate as a girl. Menstruated at twelve; dysmenorrhœa always; three children; no miscarriages. Flowed excessively at times, more since marriage; suffered every month during pregnancy. Since birth last child—two and a half years old—pain more or less daily, sharp, stabbing, radiating from ovarian regions, down thighs, and through back. Bowels regular; appetite good. Operation January 27, 1890. Left ovary, with tube, enlarged and removed. Right also removed. No drainage. Vomited once after operation. With exception of sharp pain and nausea, no untoward symptoms. Stitches removed on fourth day; no suppuration. Partook regular diet fourth day. Uneventful recovery.

CASE 30. Mrs. A. McK., first trouble two years ago, thrown from carriage, followed by constant pain in dorsal, lumbar, and sacral regions. Urination painful. Inflammation of uterus diagnosed. Severe pain in pelvis and hip. Confined to bed. Improved somewhat, but unable to walk. Recurrence of trouble in August. Physician diagnosticated cystitis, and washed out bladder, but attended with such severe pain, discontinued. Improved sufficiently to be brought to hospital December 2

1880. Galvanism applied ; pain decreased somewhat, but back so sensitive, current discontinued. First menstruated at thirteen ; exposed to cold shortly before second menstrual epoch due, and flow absent one year. On return, so painful, often confined to bed. Between August 4 and December 9, flow absent. Paroxysms of pain at time when flow would have naturally appeared. Since December, up to date, nothing appeared. Laparotomy and double oophorectomy, February 23, 1890. Extensive adhesions of ovaries and tubes ; small cyst on right side. Patient did well ; received two hypodermics of morphia up to Friday night, when was taken with severe attack resembling hysteria ; husband had been visiting patient ; did not rally for several days, and kept under the influence of morphia at times. After this recovery uneventful. Stitches removed March 5th.

CASE 31. Mrs. E. H., always delicate as a child. Menstruated at twenty. Monthly pains previously, but no flow. Menstruation painful, patient having to go to bed. Flow sometimes lasted ten days, at times occurring every three weeks. Two living children ; seven or eight miscarriages. First child born at seventh month. Second at full term, but labor difficult—instrumental. All miscarriages occurred after this labor, and all without any known cause. Patient treated for some uterine trouble for past twelve years ; in 1889, fell on sidewalk, hurting left side quite badly ; after fall, lost flesh rapidly, eighteen pounds in one month ; before this, felt quite well ; one month later, noticed enlargement in left ovarian region, about size of an orange ; painful for about two months, then pain ceased for a time, but is now present ; growth not rapid ; at times sensation like fluid moving from side to side of tumor when in bed. Operation for ovarian cyst performed April 22, 1890. Cyst removed ; drainage ; recovery.

CASE 32. Mrs. J. V., coeliotomy, April 30, 1890. Multilocular ovarian cyst ; previous peritonitis ; removal of cyst and both ovaries. The adhesions in this case were so severe that, on separating them with wet sponge and fingers, the hæmorrhage was quite constant and considerable. Several vessels in omentum and abdominal walls were tied with silk. The abdominal walls, owing to the great size of tumor, were, after the operation, very lax, and admitted of being folded over on themselves afterward ; peritoneal surface sutured with deep sutures to control hæmorrhage, and which had a good effect. These sutures were removed after forty-eight hours ; sponge lost in cavity ; found after prolonged search ; drainage. Recovery.

CASE 34. Mrs. E. C. Father died of heart disease ; otherwise family history good. Patient had scarlet fever when a child, leaving her with some kidney trouble. Menstruated at twelve ; first child born nine years

previous to operation ; delivered of five children ; last, she thinks, at eight months, living only one week. Since birth of third child, noticed irregularity in menstrual flow ; more frequent and profuse. Lessened, however, two or three months prior to operation. September, 1889, patient tapped for supposed ascites ; four gallons removed. January, 1890, again tapped ; quart of fluid obtained. Pregnant, at time, with last child. End of February, 1890, tapped again ; amount of fluid only a few quarts. Fourth and last tapping, August, 1890 ; three gallons of fluid. Child born between third and fourth tapping (March, 1890). Punctures for tapping, one, two, four, in linea alba ; three almost in right hypochondrium. August, 1890, patient noticed enlargement in right inguinal region, but noticed distension early as birth of third child, disappearing for a time, then reappearing. Treated, at time, for ovaritis and enlargement of uterus ; temporary relief. Enlargement in left side, but different from other. Leucorrhœa since birth of first child. Abdominal section September 22, 1890. Multilocular ovarian cyst, right side ; left side, parovarian cyst ; no adhesions ; patient troubled with catarrhal inflammation of intestines, which kept up diarrhœa for some time. Course of recovery uneventful, and otherwise uninterrupted.

CASES 35 and 59 constitute the same patient, Miss L. McC., æt. 23. Menstruation painful ; vomiting at times. Injured, and treated a long time for spinal trouble, also retroverted uterus. Slipped on ice, and afterward vomited for four weeks. Alexander operation for relief of retroversion, March, 1889, by Dr. Pilcher, of Brooklyn. Menstruation more painful after operation. Entered Albany hospital, April, 1890. Uterus carefully curetted, after rapid dilatation ; no improvement. Coeliotomy October 7, 1890. Right ovary enlarged to size of turkey's egg ; tube much thickened ; both removed. Left ovary and tube apparently healthy ; not disturbed. Recovery uneventful ; discharged November 3, 1890. No permanent relief from operation. Various kinds of treatment tried without benefit. Second coeliotomy, November 9, 1891. Left ovary, size of small orange, undergoing cystic degeneration ; tube enlarged ; both removed. Good recovery ; patient in excellent health September 1, 1894.

CASE 36. Miss M. G. Mother died of pneumonia, otherwise family history good. Health never good ; menstruated at thirteen ; first day of flow always accompanied by dysmenorrhœa, lasting five days ; fluid dark and liquid. About four years ago patient noticed enlargement in abdomen ; does not remember where it began. Gradually increased until tumor began to interfere with respiration, when, fluid being suspected, patient tapped, February, 1880. Ten quarts removed, but necessary to tap again in August, 1889, four quarts being obtained this time. Both punctures low down and in linea alba. Never any pain about loca-

tion of punctures. Since last tapping, abdomen enlarged until about as large as first tapping. Operation October 10, 1890. One large and several small cysts removed; some very slight adhesions broken. Left ovary healthy; not removed. Recovery uninterrupted. Apposition at lower angle not perfect; silkworm gut; exuberant granulations.

CASE 37. Mrs. E. W. Family history good; personal history good until two years previous to operation; menstruated at thirteen; married eight years; has two children; two miscarriages; oldest child five and youngest two years old; first miscarriage, April, 1888; second, September, 1888. Cause of first, fall; second, indefinite; both supposed to have been advanced to third month. In the summer of 1889 patient had pain over the site of right ovary, which grew steadily worse until, in November, she was forced to her bed for some time. Blisters and hot applications had no effect. During winter had attacks of unconsciousness. Operation, October 21, 1890, revealed enlargement of tube and ovary on right side, due to chronic inflammation. Left ovary could not be found; apparently thoroughly atrophied, and covered by firm adhesions. Right ovary and tube removed in usual manner, after tearing away numerous adhesions. Glass drainage, packed with iodoform gauze. Drainage very bloody for some time; gradually cleared. Glass tube removed October 24. Rubber tube substituted; removed 27th. Further course uneventful. Discharged the sixteenth day.

CASE 38. Mrs. S. K., four years previous to operation had severe brownish-looking, offensive discharge from vagina. Steady pain in ovarian and across lumbar regions. Husband admitted having had specific urethritis. Diagnosis, pyosalpinx. Cœliotomy, October 30, 1890. Bilateral pyosalpinx, double parovarian cyst and small fibroid, size English walnut, on fundus uterus. Uterine appendages removed, then fibroid. Latter carefully dissected from fundus, but bleeding very severe, controlled by use of thermocautery. Glass drainage; discharge free for forty-eight hours; rubber tube substituted and kept in for five days. Recovery uneventful; discharged eighteenth day. Eight weeks after operation small abscess formed in sinus left by drainage tube, through which escaped one of the silk ligatures.

CASE 39. Mrs. F. M., menstruated at thirteen—had a severe fall at same time; sick two weeks from this—perfectly helpless; two years after ill again in the same way—did not leave room for three years. Ever since menstruating pain in back—much increased during first two or three days of monthly periods. Married ten years; one child; no miscarriages. Diagnosis of ovarian trouble made. Oophorectomy November 29, 1890, left ovary cirrhotic, right in condition fibro-cystic degeneration; both removed. Day following operation severe pain over spine of right scapula—darting

down back of arm even to tips of fingers; joints tender for some time; this lasted for three days, recurring at intervals afterwards in spite of counter-irritants and galvanism; third day usual attempt was made to move the bowels with enema, without success; was continued during the whole week, sulphate of magnesia and one sixth grain calomel administered without any result until seventh day, when small movement. December 9, bowels moving daily. Cystitis with frequent desire to urinate was an annoying complication; her symptoms finally improved, she leaving the hospital January 5, 1891; patient, from letters received later, made a slow but good recovery,

CASE 41. Miss E. K., æt. 33. Abdominal trouble at eleven, diagnosed as dropsical, which disappeared under treatment; multiple abscesses about left leg; Dr. A. March operated, removing necrosed portions of bone; later, old cicatrices opened up partially. March, 1890, felt sharp sudden pain in each groin, after lifting heavy washing; enlargement on both sides, corresponding to double femoral hernia, followed, abdomen now enlarged. Operation advised, but advice not followed, patient enlarging rapidly in meantime. I advised operation December, 1890. Cœliotomy January 3, 1891; cyst of right ovary had ruptured. Multilocular cyst, left ovary, with uterine appendages, removed; both cysts contained viscid, glairy mass, some remaining and being agglutinated to intestine; thorough irrigation; drainage—removed third day; severe diarrhœa controlled; tenth day lower angle wound opened, discharging four to five ounces fetid pus, after which patient made good recovery, discharged April 29, fistula almost healed.

CASE 42. Miss M. G., family history good, with exception of one uncle dying of phthisis. Personal health good up to 1889, when patient had attack of anæmia; recovered wholly from this. Menstruation at twelve, painful but regular. Noticed hard enlargement abdomen in 1890; growth slow at first, but during two months previous to operation rapid. Diagnosis, tubercular peritonitis. Cœliotomy January 14, 1891. Profuse discharge of fluid; peritoneum studded with tubercles; left ovary enlarged, cystic and studded with tubercles—removed; glass drainage, removed thirteenth day, rubber substituted; discharge gradually lessened, at end of second week; drainage tube forced out, could not be reinserted; gauze packing for ten days; discharged forty-second day, recovery complete—no ascites.

CASE 43. Miss J. S., æt. 19, family and personal history good. Tumor developed fifteen months previous to entering Albany hospital, February 27, 1891. Diagnosis, unilocular cyst. Cœliotomy February 28, 1891, 11 a.m. Unilocular cyst from left ovary found, two gallons clear-looking fluid removed, and pedicle secured with Staffordshire knot; cyst,

size of ordinary walnut ; surface of right ovary opened and curetted ; edges of this incision sutured with iron-dyed silk ; ovary and tube returned to pelvic cavity. Saw patient at 1 p.m., when all seemed to be going well ; was called out of town, not returning until 7.30 p.m., when, on visiting patient with house physician, internal hæmorrhage was evidently going on. Pulse 142, and sighing respiration ; wound immediately reopened, pelvis and abdominal cavity found filled with clotted blood ; vessels had slipped from ligature, or knot loosened, evidently within an hour previous, from record of nurse. Pedicle religated ; no hæmorrhage from incision in right ovary ; two pints saline solution poured into the peritoneal cavity, wound closed and drainage introduced. Everything possible to bring on reaction was done ; patient rallied slightly at first, and it seemed possible for her to react, but her mental condition was seriously shocked ; she was alarmed, gradually sank, and died March 1, at 8.10 p.m.

CASE 44. Mrs. A. E., family and personal history good. Rapid enlargement right side near spine of ilium from December, 1890 ; solid growth left side. Coeliotomy, March 3, 1891. Papillomatous cyst from left ovary ; three gallons of fluid, some adhesions ; another cyst connected with right ovary, closely adherent to surrounding tissues ; this tapped and emptied of a viscid fluid—dirty, brownish color ; in bottom of this cyst was another papillomatous growth ; adhesions such it was impossible to remove this entire, cyst walls stitched to abdominal wound, and rubber drainage introduced ; left side, pelvic cavity, glass drainage tube placed ; patient recovered quickly and discharged May 18, 1891 ; slight sinus of cyst, right side, still existed. Readmitted June 3, 1891, with partial obstruction of bowels. Yielded to calomel, salines, and enemas ; sinus closed, but showed disposition to open, and mass could be felt connected with right side of pelvis ; improved slowly, and finally discharged August 12, 1891, having gained in flesh and strength. In good health until January, 1893, when there was a return of intestinal obstruction, and patient readmitted to hospital. Great distension of abdomen ; lower portion old cicatrix incised ; immediate presentation old, papillomatous mass filling right side pelvis. In attempting to enucleate mass, small intestine was opened into ; gauze packing introduced, supposing that patient could scarcely recover, but by continuous irrigation a great amount of detritis washed out, finally fæcal fistula closed, patient had normal movements, gained in health and returned to her work, but during latter part of winter of 1894 growth had increased, and in May she suffered from a fistulous opening connected with sarcomatous mass, giving off an offensive discharge. Not heard from since.

CASE 45. Mrs. N. A., family history tubercular maternal side, good otherwise ; personal history anæmia, but fairly well nourished. Two chil-

dren, youngest five ; no miscarriages. After birth last child, pain developed right side over ovary. 1890, first noticed growth in right side, which gradually increased ; menstrual flow normal and regular until five months previous to operation, then more profuse, and dull pain followed advent, in right side ; feeling of numbness in right leg since birth last child. Operation March 18, 1891. Removal both ovaries, left adherent. Tumor felt right side proved to be an ectopic pregnancy. Bowels moved third day, stitches removed eighth ; on twelfth patient sat up for one hour and walked about ten feet ; made splendid recovery and discharged on seventh day. Later, patient had her menstrual period for over a year. I then curetted cavity uterus thoroughly. Since which time she has remained well.

CASE 46. Mrs. M. S., coeliotomy April 25, 1891. Multilocular ovarian cyst, left side ; right ovary undisturbed ; there were some adhesions ; glass drainage for five days, then rubber—after removal discharge, at times pus, continued for six months, when ligature came away and patient made a good recovery.

CASE 47. Mrs. E. C., father died of phthisis at thirty-four ; mother living at fifty-six, and has had cerebral hæmorrhage. Menstruated at fourteen ; ceased for year, regular since ; one child, aged six ; no miscarriages. Since birth of child menstruation very painful ; peritonitis after birth of child, again in 1883, brought on by lifting ; typhoid fever at seventeen ; pneumonia at twenty ; in 1889 had cough and slight hæmorrhage from lungs. Occipital headache ; appetite poor ; urine normal. Coeliotomy, May 4, 1891. Oophorectomy ; both ovaries cirrhotic—left cystic—bound down by firm adhesions ; tube packed every ten minutes with gauze for three hours ; removed May 5, much pain until tube removed ; no noticeable improvement until eighth day, when enema given was followed by very free movement of gas and fæces. Recovery uninterrupted except for obstinate cystitis, present still when discharged on thirty-fifth day.

CASE 48. Mrs. A. McC., family history good. Menstruated at twelve, painful ; fifteen years previous to operation trouble began, accompanied by spasms. Second child born, 1883 ; two years later diagnosis of uterine misplacement made and she received treatment. Pain in right ovary for ten years, along spine painful points, occasional points pain along angle ribs, sternum on left at juncture true and false ribs. All treatment failed, and coeliotomy done May 22, 1891. Both ovaries diseased ; right markedly cirrhotic ; salpingitis. Improved rapidly and discharged twelfth day. Readmitted to hospital September 24, 1891, very hypochondriacal—no special treatment, and patient left much improved, October 12, 1891. March, 1892, much improved mentally and physically.

CASE 49. Mrs. E. C., aged thirty-three, family history good. Suffered from dysmenorrhœa ; at twenty had peritonitis ; married at twenty-one ;

first child one year after ; labor very difficult ; dysmenorrhœa ceased after that ; since birth of child has had dull aching pain, both sides ovarian regions. Treated fall of 1890 for stricture of rectum and lacerated cervix ; no improvement ; mass size large orange left side of pelvis. Diagnosis of salpingitis, operation advised. Coeliotomy May 27, 1891. Both ovaries enlarged, cystic, double pyosalpinx ; appendages removed ; many firm adhesions ; glass drainage tube—rubber substituted third day, serious discharge still quite free ; drainage removed seventh day ; some pain over abdomen, otherwise recovery uninterrupted. Discharged on twenty-first day ; in perfect condition of health September, 1894 ; gained in flesh and strength ; able to get about with absolute comfort.

CASE 51. Miss L. M., invalid many years, vague trouble. Physician supposed it chronic case hysteria, but first examination revealed enlarged inflamed ovary right side ; extremely irritable descending colon ; well-marked myelitis lumbar region ; extremely anæmic, erotic, sleepless, plaster jacket applied for artificial support, later Paquelin in cautery, down spine, excellent line of treatment tried with only temporary relief ; menstruation irregular, scanty, painful. Diagnosis cirrhotic ovary double salpingitis. Oöphorectomy July 13, 1891. Diagnosis confirmed, also pyosalpinx left side. Patient did nicely with exception of nausea for few days ; stitches removed fifth day ; recovery uneventful, and discharged August 15, 1891. Letters from Dr. Church and patient later report good result.

CASE 52. Mrs. A. E. B., family history good. Well during childhood ; menstruated at thirteen ; delicate until twenty ; one miscarriage. Periods not painful, but flow profuse. Well until eight weeks previous to operation. May, 1891, noticed enlargement abdomen, supposed due to gain in flesh. October, 1890, to June, 1891, flowed constantly, but small in quantity. No show since June, 1891. July, 1891, sudden, severe pain left side abdomen ; diffuse and general peritonitis developed, lasting four weeks. Coeliotomy, September 1, 1891. Large ovarian cyst, left side. Both ovaries removed. Patient very weak during progress operation ; hypodermics of brandy and strychnine given. Drainage tube removed second day ; bowels moved fifth day. Good recovery. Discharged nineteenth day.

CASE 53. Mrs. M. M., family history negative ; patient generally well ; menstruated at fifteen ; always regular—dysmenorrhœa. In 1879 had inflammation of bowels. One miscarriage first year of marriage. Six months previous to operation noticed enlargement left inguinal region : increased rapidly, distending whole abdomen. Slight dyspnœa. Coeliotomy, October 1, 1891. Ovarian cyst, left side, two gallons fluid. Pedicle of sac from left broad ligament—ligated in sections and removed, also tube and ovary, that side—cyst and hydrosalpinx. Patient rallied well

from operation ; troubled with nausea and vomiting two or three days. Sat up eleventh day ; home fourteenth day, feeling very well. In good health one year later.

CASE 54. Mrs. V. S., family history of paralysis ; menstruated at fourteen, when she took cold ; afterwards suffered from dysmenorrhœa ; married at twenty-one ; no children ; no miscarriages. Thirteen or fourteen years previous to operation, tumor in right hypochondrium—contents evacuated, she said, through stomach. Sick nine years. Spinal trouble prevented walking for six months. Misplacement of uterus. October, 1890, tumor in inguinal region—grew rapidly afterwards ; in June, 1891, distending whole abdomen. Menopause at fifty-two ; cœliotomy, October 6, 1891 ; short incision, large unilocular ovarian cyst, right side ; six quarts fluid removed ; cyst removed. Patient did nicely ; bowels moved third day ; discharged seventeenth day ; in good health two years after operation.

(To be continued.)

OBSTETRIC FORCEPS.

BY K. N. FENWICK, M.A., M.D.,
Professor of Obstetrics, Queen's University,
KINGSTON.

EVERY practitioner has a fancy for some particular variety of forceps, but perhaps has no good reason for his choice, other than that it is the instrument he first became used to, or that it was recommended by his teacher, and so he has continued to employ it.



As a rule, a long pair of forceps suits one's purpose both at the outlet and in the excavation, and by certain appliances or manœuvres it can also be used as an axis-traction instrument when the head has just engaged at the brim.

Having felt the need for some time of a forceps which would meet all indications, I had a pair made, which have done me good service, and

which I brought before the last meeting of the Dominion Medical Association at St. John, N.B.

All forceps may be divided into two classes—those constructed upon the English type, the best examples being Simpson's, Barnes', and Elliott's, which are intended to be applied to the sides of the pelvis, but do not exercise compression; and those constructed on the French type, the Hodge being a good example, and are intended to be applied to the sides of the child's head.

The French type seems to me more scientific, as we can exercise a slight amount of compression when necessary, and assist rotation when the head is high up in the excavation.



Then, by the use of the traction rod, the tendency to the use of the "oscillatory movement" is done away with, so dangerous to the child and the soft parts of the mother, while the child's head is thus drawn through the whole length of the pelvic canal in its proper axis, with the least expenditure of force.

It is very obvious that the ordinary forceps cannot accomplish this, as it makes traction only in one direction, and hence much of the force is expended on the pubic bone or tissues of the mother, instead of the child's head.

Furthermore, as the child's head is flexed on its chest, the ordinary

forceps are apt to grasp the head too near the sinciput, and so undo flexion, substituting the occipito-frontal for the suboccipito-bregmatic diameter.

Again, to avoid slipping, the German lock is much better than the English or mortice lock, and this is fortified by a screw at the end of the handles, which also can be used to produce compression when that is necessary.

This screw is removable, so as to be easily cleaned.

To render the instrument thoroughly aseptic, it is made entirely of metal, so that it can be boiled before using.

To recapitulate, then, the instrument here figured is constructed of the best steel only, and nickel-plated, so as to be aseptic and easily cleaned ; the blades are of the French type, the cephalic curve being that of a circle, whose diameter is nine inches ; the tips are one inch apart ; the pelvic curve is 35° ; the greatest width is $2\frac{5}{8}$ inches ; the lock is that known as Siebold's ; there is a screw at the end of the handles to hold the blades together when applied to the head, and to make compression when necessary ; and there is a traction rod affixed close to the under surface of the blades, by which traction is made, while the handles act as an indicator of the pelvic axis, but are not used to make traction after the forceps have been applied to the child's head.

We thus have an instrument possessing all the advantages of the Tarnier forceps, and very little more expensive than the ordinary Simpson or Hodge.

Selected Articles.

THE RIGHTS AND PRIVILEGES OF PHYSICIANS CALLED TO CASES OF ABORTION.*

EGBERT H. GRANDIN, M.D., President, in the chair.

The Secretary read the call for the special meeting, signed by twenty members, as follows :

Whereas, a number of instances have occurred in this city where reputable members of this society have been arrested for complicity in malpractice cases, without even the shadow of a reason for such action on the part of the police ; therefore, we, the undersigned, respectfully request you to call a special meeting of the society for the purpose of ascertaining the rights and privileges of physicians who may be called to attend cases of abortion, etc.

The President stated that, in the judgment of the members who had signed the call, an indignity had been offered the profession—an indignity which, if not protested against, might become a precedent for the infliction of a similar indignity on each and every physician when, in the pursuit of his vocation, he was called to the bedside of a dying woman. It would seem that the profession was impaled on the prongs of a dilemma which confronted it whichever way it turned. If we did not respond to calls of this nature we were termed, and rightly so, unfeeling, and unworthy the name physician ; if we did respond, and on suspicion reported the case to the authorities, if the suspicion proved unfounded, it was a question whether we were not open to a suit for libel ; furthermore, if we did report the case and the symptoms supported the suspicion of malpractice, we were liable to arrest and the consequent notoriety. We were here, then, to counsel together calmly, dispassionately, as to our rights and privileges in this matter. The medical profession of this city had always stood on the side of law and order. We were here to protest, in a forcible manner, against the assumption that the presence of a medical man at the bedside of a dying woman was *ipso facto* evidence of wrongdoing, of being

*Being a report of a special meeting of the Medical Society of the County of New York, held March 16th, 1895

an accomplice in a criminal act performed before his advent. We were here possibly also to express again, as we had over and over again, our utter abhorrence as medical men of criminal foeticide. And, while we were about it, we might as well inquire why this crime not only existed, but seemed to be on the increase in this community. The President felt that the statement would pass unchallenged, that a reputable man had never in this city been found guilty of criminal abortion. It was the midwives, and the men under the guise of specialists in diseases of women, the notorious abortionists, who committed this crime, and who were found out, who were indicted, and who were rarely punished. It was proper, therefore, to ask if the blame for the existence of this evil in this city might not properly be laid at the door of the officers of the law. It went without saying, that if swift justice were meted out to these miscreants, the abortionists, they would find this city so hot for them that after a time criminal foeticide would cease to exist in this community, so far as it ever would cease to exist.

The President said Dr. Marx would relate a recent case in this city which would give the members food for thought and discussion.

A Recent Case.—Dr. S. Marx then related the case reported recently in the daily papers. A reputable member of the society had been called to see a young woman, recently a widow, at the house of a midwife. Both parties denied absolutely any form of operation. The patient had ceased to menstruate about four months before, was bleeding, and could give no cause except lifting heavy tubs. Having no other place to go under such circumstances, she had entered the house of the midwife. The doctor made an examination, found the uterus about the usual size at four months pregnancy, filled with detritus, and symptoms of sepsis. The treatment was such as the conditions justified, but as the patient got worse another reputable physician was called, to whom the patient and midwife told the same story, denying criminal procedures. As the physicians were not in a position to remain all night with a dying woman, they advised that a hospital ambulance be called. Notwithstanding that they had complied with the law to the letter, they were taken from their offices by the police to the police court. Before dying, the woman exonerated the doctors and incriminated the midwife. The coroner listened to the story of the detectives, and not that of the physicians, and demanded bail of the latter, which finally was made only nominal. The coroner's inquest showed that the abortion had been committed by the midwife, and that the action of the two physicians connected with the case was simply in line with the duties of their profession, and that they were in no way implicated in the criminal operation.

The President remarked that here was an example, then, where two physicians had been arrested in the performance of their duty, and without

the shadow of a reason. It was true they had been acquitted before the coroner, as might have been predicted, but the story of their arrest had been read in the papers by thousands who thereafter associated them in their minds with abortionists, while the coroner's report probably had not been read by five hundred.

Another Case.—Dr. A. Y. Reid related his own experience with a case of alleged criminal abortion in 1892, a full history of which may be found in the New York *Medical Journal*, April 8, 1893. The points which he emphasized were that any physician was liable to be arrested in the discharge of his duty in connection with cases of abortion, or possible abortion; that there were some men who, under their guise as officers of the law, sought in cases of this kind to incriminate reputable physicians for purposes of blackmail. The coroner in his case laughed at the idea that he would be able to get a jury of reputable physicians, and said he could himself pick out one who would bring in such a verdict as he thought fit. In Dr. Reid's former report of the case we find that the following eminent members of the profession actually served on the coroner's jury: Drs. Munde, Dudley, Boldt, Grandin, Sims, Jacobus, Janvrin, Van Santvoord, Coe, Goffe, Peaslee, and Morrill. Besides absolutely exonerating Dr. Reid, the jury said in its verdict: "This jury desire to express their condemnation of an apparent too great readiness on the part of some persons connected with this case to incriminate, without sufficient evidence, a reputable physician, and thus subject him to the indignity of arrest and criminal prosecution."

A friend afterward heard a police captain say that Dr. Reid would thereafter have to enter the ranks of the abortionists; meaning that legitimate practice would leave him. Such was known to be the usual effect of allowing one's name to enter the newspapers in connection with cases of abortion, however innocent he might be. The result had not been as predicted in this instance; his patients had remained with him, yet there was no doubt but that his practice had suffered considerably, while the legitimate expenses connected with the case had been over \$700. He had no doubt but that there were many physicians in the city who were paying blackmail to the police to be permitted to practise their profession legitimately, because some time in the past, when inexperienced, they had begun to do so to prevent their names from entering the public press in connection with some case of abortion with which they had had no criminal, but simply professional, relations.

Dr. John Irwin thought it might be well to exclude the reporters of the press on this occasion, so that members might feel freer in relating their experience. The motion was lost, no affirmative votes.

Physicians not Good Citizens.—Dr. A. Jacobi said he arose to speak, not simply as a physician, but as a citizen of the city of New York. We

all knew what these things meant. These proceedings on the part of the police officers had been of the same character as that noticed in the papers two days ago, where a reputable citizen was held up by an officer in uniform and taken to a police station. The same thing might have occurred to a doctor on his way to see a patient, and he might have handed over five or ten dollars in order not to be detained, or to avoid sleeping in a station. Indeed, he did not doubt but that some present had done that very act, and were now ashamed of it. We had been exposed to robbery of all kinds, and to violence as no city in Europe would permit. And we were all at fault, for we were not good citizens. We had not participated in public affairs. If we would rid ourselves of the danger of being held up in the street, and of being taken from our offices to the station house, we must attend public meetings; must be at the primaries; must go to the polls, not in a body as physicians, but one and all as citizens. As a profession he did not think we could do anything. The common run of politicians cared not what we did so long as we had no votes. Our protest amounted to nothing except at the primaries and the ballot.

Dr. C. A. Von Ramdohr mentioned three cases in which he pronounced the action of coroners or deputy coroners as officious, if indeed it was not based on inefficiency or corruption. He differed from Dr. Jacobi, and believed that the Medical Society of the County of New York could do something. He had once asked a judge of the Supreme Court what he should do in cases of the kind under discussion, and received two replies, one private, the other professional. The first was never to report a case of abortion which might come to his knowledge; the second never to meddle with a coroner's office, nor with the office of a police justice, but to go to the office of the district attorney; it was more decent.

To Obtain Legal Opinion.—Dr. Von Ramdohr then moved that the society obtain legal opinion as to whether doctors had to report cases of abortion which came to their knowledge in the course of their professional duties, to whom must they make the report, and when.

Later this motion was adopted, after having been amended to refer the question to the Comitia Minora and the counsel of the society.

Dr. John A. Irwin contended that it was not for the physician to report to the authorities any case of abortion. For his own part, he declined to play the detective at any time whatsoever. His first and only duty was as a professional man. If called to a patient in distress, he did whatever he could to relieve her, totally ignoring the crime which might have been committed in the first instance which brought on the distress.

Dr. A. Jacobi read a few lines from Field's Medico-Legal Guide, which expressed his own opinion, and was in line with the remarks of Dr. Irwin:

A person duly authorized to practise physic or surgery shall not be allowed to disclose any information which he acquired in attending the patient in a professional capacity which was necessary to enable him to act in that capacity. But the patient may waive the privilege thus secured him by the State, and permit his medical adviser or attendant to disclose such information.

In Dr. Jacobi's opinion, as long as the doctor went to a case of criminal abortion his lips were sealed, and he had nothing whatsoever to do with the police unless the patient waived the privilege of secrecy.

Dr. Bruce made some remarks, and suggested that the counsel of the society ought to defend members in cases of this character, which would be equivalent to a defence by the society. The President replied that the services of the society, through the board of censors, were at the disposal of every member who might happen to be under the charge of criminal abortion of which he was not guilty.

The Coroner's Side.—Dr. E. W. Hoeber spoke from the point of view of the coroner, he having been one elected last fall. He agreed with Dr. Jacobi that it was the fault of physicians that they were in the position of which they complained. They voted for men to fill the office of coroner who were not physicians, and who, therefore, could not be expected to understand so fully the needs, the rights, and the privileges of the medical profession. One speaker had mentioned deputy coroner, there were no deputy coroners, but there were coroners' physicians, and it was true they were liable to make mistakes, but so were other physicians. The doctor who said he would not report a case simply ignored and disobeyed the law. Ignorance of the law was no excuse; he would be held as an accessory if he knew of a crime and failed to report it. The patient whose case Dr. Marx had related was in the house of a midwife who had advertised in the papers for years. The doctors who were called ought to have known this, they ought to have suspected that this woman had committed a crime, and, learning the fact, ought to have reported it to the authorities. If the law requiring us to report such cases was unjust, we should seek to repeal it. Practically, it was only women who died, and who died under suspicious circumstances, whose cases came before the coroner or police authorities, and because of lack of evidence it was of little avail for the physician to report a case until he saw that his patient was likely to die.

The discussion was further participated in by Drs. Tuttle, Vedin, H. S. Stark, Michaelis, and others, and a motion offered by Dr. Stark was adopted, calling for an expression of an opinion from the counsel of the society with regard to the medico-legal position of physicians when called to cases of criminal abortion, this opinion to be printed and distributed among the members.—*Medical Record*.

Clinical Notes.

REPORT OF A CASE OF APPENDICITIS.

By H. MORELL, M.D., C.M. (TRIN.),
SLAYTON, MINNESOTA.

THE object of this history of an attack of appendicitis is merely to give a clinical report of a case which occurred in my practice. My reason for recording it is that I have found very few cases published which were treated medically, and in which the full history of temperature, etc., were recorded. Operation was advised after the first forty-eight hours, but was refused.

B. O., aged 17, female, was taken suddenly ill while walking home from school, a distance of three miles; complained of sudden pain in right side, with vomiting. She thinks she had hurt herself while romping at school. I saw her about 10 p.m. the night after. She has pain in right iliac region, with great tenderness over McBurney's point. The pain comes on at intervals, and extends down the right thigh; no tympanites. Bowels moved this morning. Temperature $101\frac{2}{5}^{\circ}$. Pulse 100. Tongue slightly coated.

March 10. Temperature $100\frac{3}{5}^{\circ}$. Pulse 80. No pain. No vomiting. Feels comfortable.

March 11. 11.30 a.m., temperature $102\frac{1}{5}^{\circ}$. Had a chill the night before. Vomiting. Great pain in right iliac fossæ. 10 p.m., temperature $101\frac{2}{5}^{\circ}$. No pain. Comfortable, except vomiting. Tongue coated.

March 12. Temperature $101\frac{2}{5}^{\circ}$. No pain.

March 13. 2.30 p.m., temperature $100\frac{1}{5}^{\circ}$. Pulse 90. Comfortable. 9.30 p.m., temperature $100\frac{4}{5}^{\circ}$. Pulse 100. Pain in region of appendix. Movement of bowels with severe pain.

March 14. Temperature $100\frac{1}{5}^{\circ}$. Pulse 84. Had a good night. Can bear pressure over appendix without pain.

March 15. Temperature $100\frac{4}{5}^{\circ}$. Pain in appendicular region, with vomiting.

March 16. 11 a.m., temperature $102\frac{1}{8}^{\circ}$. Pulse 100. No tenderness. Vomiting. 3 p.m., temperature $103\frac{1}{8}^{\circ}$. 8 p.m., temperature $102\frac{2}{8}^{\circ}$. The temperature was taken by an assistant. No examination of abdomen made. No pain nor vomiting complained of.

March 17. 12 a.m., temperature $102\frac{2}{8}^{\circ}$. Pulse 100. No pain. Vomiting. Slight induration over appendix, with pain on pressure.

March 18. 12.30 a.m., temperature 103° . Vomiting. No pain. Marked fullness in region of appendix. 3 p.m., temperature 103° .

March 19. 10.15 a.m., temperature $102\frac{2}{8}^{\circ}$. Comfortable. Bowels moved twice. No pain. Consultation with Dr. Wm. McGillivray, Pipestone, who advised operation. 9 p.m., temperature $102\frac{3}{8}^{\circ}$. Vomiting. No pain.

March 20. 11 a.m., temperature 103° . Pulse 100. No pain. The fullness in right iliac fossæ is prominent. Bowels moved easily without injections.

March 22. Temperature $99\frac{2}{8}^{\circ}$. No pain. No prominence in right fossæ. No pain on pressure.

March 23. Temperature normal. No pain. Vomiting ceased. Tongue clean. Bowels regular. Feels quite comfortable. Rapid recovery.

The fluctuation in the degree of pain, of course, was due to the influence of morphia.

The treatment which was followed in this case was rest, morphia, and enemata. The inference one would draw from this case would be that the abscess ruptured into the bowel, as a quantity of pus was found in the stools.

Progress of Medicine.

MEDICINE

IN CHARGE OF

J. E. GRAHAM, M.D., M.R.C.P. Lond.,

Professor of Medicine and Clinical Medicine, University of Toronto ; Physician to the
Toronto General Hospital, and St. Michael's Hospital ;

AND

W. P. CAVEN, M.B., Tor.

Lecturer in Clinical Medicine in the University of Toronto ; Physician to
Home for Incurables.

PHYSICAL SIGNS OF ACUTE PERICARDITIS.

Josserand, of Lyons (*Sem. Méd.*, November 3rd), remarks that the friction sound in pericarditis is often in arrear of the anatomical evolution of the disease, not being present until a longer or shorter period has elapsed. The following is, in his opinion, an early sign of real value. When, in the course of an acute articular rheumatism, comparative auscultation is made at the cardiac base in the aortic and pulmonary areas, it sometimes happens that the second sound in the pulmonary area is found to be more intense, louder, and more metallic ; the opposite is the case in chronic aortitis, in which the sound is more marked on the right side of the sternum than on the left. Sometimes even this difference is appreciable by the hand, which perceives an exaggeration of the diastolic closure shock of the pulmonary sigmoid valves. The existence of this sign should cause one to search carefully for a friction sound, which will then often be discovered when a superficial auscultation would have allowed it to escape notice ; if not present, its more or less early appearance may be predicted. This noisiness of the second sound is early, and usually transitory ; it precedes the friction sound by from one to three days, and, with few exceptions, is replaced by it. It is a sign proper to the initial congestive period, like the fine crepitation of pneumonia. Its anatomical explanation is, Josserand thinks, that the heart muscle at the base of the pulmonary artery is rendered congested, turgescient, more dense, and, perhaps, covered with fibrinous lymph, and thus amplifies to the ear the neighboring

sigmoid sounds. This sign is important, first in diagnosis, to enable one to decide between a friction sound and an anæmic murmur or extra-cardiac sound, as it permits one to decide in favor of the friction sound; secondly, as a sign that the heart is affected, with localization and intensity difficult to state precisely. It indicates the necessity for early revulsive medication.—*Epitome, British Medical Journal.*

CASE OF CHLOROSIS TREATED BY RED MARROW TABLOIDS.

The success in a case of progressive pernicious anæmia treated by Dr. Fraser* with red bone marrow (raw) encouraged me to employ the same substance in the shape of tabloids in allied disorders. I quote a case which will illustrate the results I have gained.

B.H., a young lady, æt. 18 years, first came under treatment on July 10th, 1894, complaining of amenorrhœa, dyspnœa, palpitation, constipation, œdema of ankles, and loss of flesh. I ordered her \mathcal{R} liq. ferri *mx*, liq. arsenicalis *mij*, aq. ad. \mathfrak{zj} , t.d.s., and an aloin compound tabloid every other morning.

By August 2nd, 1894, the above treatment had caused but little improvement. She was still suffering from severe cephalalgia, nausea, and faintness on rising in the morning; weakness, anorexia; pallor of face and lips was marked. She was still habitually constipated, highly nervous, and the menses never more than a "show." The pulse was small, quick, and sometimes irregular. There was a venous hum over the great veins, and a systolic *bruit* at base. The red cells numbered 2,800,000 per c.cm. The hæmoglobin was 40 per cent; many of the corpuscles were irregular in shape; not many blood plaques were seen. On August 30th, 1894, after taking four red marrow "tabloids" a day, the subjective symptoms and abnormal cardiac *bruit* had almost disappeared; she looked brighter; appetite was fair; there was no œdema of ankles, the bowels were regular, the menses almost normal. The red corpuscles numbered 3,200,000 per c.cm.; very few irregularly shaped hæmocytes were seen. The hæmoglobin was 70 per cent., and the blood plaques more numerous.

The above case justifies me in recommending these agents (tabloids) in the following conditions: Anæmia; oligæmia from loss of blood (wounds, hæmorrhoids, hæmoptysis, hæmatemesis, etc.); anæmia following acute diseases (typhoid, etc.); tropical anæmia (parasitic or malarial); anæmia of toxic origin; leukæmia or lieno-leukæmia (acute or chronic); and progressive pernicious anæmia.—Forbes, in *British Medical Journal*, December 8th, 1894, p. 1308.

* *British Medical Journal*, June 2nd, 1894, p. 1172.

OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

Professor of Obstetrics in the University of Toronto; Obstetrician to the Toronto General Hospital.

ASSISTED BY

H. CRAWFORD SCADDING, M.D.,

Physician to Victoria Hospital for Sick Children.

AFTER THE DELIVERY OF THE PLACENTA.

R. Fl. ext. ergotæ,

Fl. ext. hydrastis canadensis aa ʒ iv.

Fl. ext. hamamelis virginicæ q.s. ad ʒ ii.

M. Sig. : Teaspoonful three times a day.

—Stuver.—*Medical Record.*

ECLAMPSIA OF PREGNANCY.

Hypodermic of morphia followed with five or ten minims of tincture of veratrum viride by same method.—Page.—*Medical Record.*

WALCHER'S POSITION, AND ITS PRACTICAL VALUE IN OBSTETRIC OPERATIONS.

In the *Archiv für Gynakologie*, 1893, Band 45, Hest 2, Wehle reports the interesting results at the Dresden clinic in employing Walcher's position during delivery in contracted pelves. This procedure consists in placing the patient upon her back at the edge of a bed or table, extending the thighs and allowing them to fall downward as far as possible. Walcher, writing on the subject in 1889 (*Centralblatt für Gynakologie*, 1889, p. 892), asserted that the conjugata vera of a contracted pelvis varies with the posture of the patient, while Klein (*Zeitschrift für Geburtshilfe*, Band 21, s. 74) found that the true conjugate and diagonal conjugate undergo a change of five-tenths of a centimetre in various postures of the patient. These observations have been repeated by others, and lately by Wehle, who gives a tabulated list of twenty-five labors in contracted pelves. In these labors the patient was put in this position and delivery was effected by version and extraction. None of the mothers died, but two of them

had fever during the puerperal period. Of the children, .80 per cent. survived. Of these twenty-five cases, seventeen had a conjugata vera of eight centimetres, and in these cases eighty-two and three-tenths per cent. of the children survived. Especial care was to maintain the membranes unbroken, that complete dilatation might be present before the beginning of extraction.

In a recent paper on "Posture in Labor," Jewett (*Brooklyn Medical Journal*, 1894, No. 11) states that he has examined puerperal patients, finding a gain in the antero-posterior diameter of the pelvis, when the patients were in Walcher's position, varying from one-half to three-quarters of a centimetre; in four non-puerperal pelves measured upon the cadaver the gain in this position varied from four to six millimetres.

Fehling (*Munchener med. Woch.*, 1894, No. 44) has recently utilized Walcher's posture in three cases of contracted pelves, in two of which labor was induced; he found that a broad band or girdle passed beneath the axillæ was of comfort to the patients, as the posture tended to cause them to slip down from the bed on which they lay. They could not maintain this position with comfort longer than two or three hours. Fehling makes an estimate of a gain of from six to eight millimetres in the diameters at the brim of the pelvis by this procedure.—*American Journal of the Medical Sciences*.

TREATMENT OF PLACENTA PRÆVIA BY MEANS OF THE INTRA-UTERINE COLPEURYNTER.

Duhrssen (*Deutsche medicinische Wochenschrift*, 1894, No. 19) contributes an article on the above subject. The introduction by Braxton Hicks of the method of treating this condition by means of combined version has given excellent results for the mother, but quite different for the child; the mortality of the latter reaching 60 per cent. The great disadvantages of this method are avoided by the introduction of the uterine colpeurynter, and this can be easily made aseptic. In six cases which the author reports all the mothers did well, and five of the children were born living. Two points are to be carefully observed in this method: (1) To introduce the colpeurynter into the ovisac, the membranes being ruptured. (2) To make steady, regular traction on the distended instrument, so as to compress the detached placental flap against the bleeding uterine vessels. This is best done by making traction through the tube. In 50 per cent. of cases, within three hours the instrument is expelled by uterine contraction, and birth ensues.

Not over half a litre of water should be put in the bulb. Cremaillier's long ball forceps are the best for introducing the folded colpeurynter into the uterus, and the introduction is practicable whenever the fingers can be

introduced into the cervical canal. The finger should remain in after the bag is introduced until it is filled properly. If it be necessary to remove it, the fingers must be disinfected and carried up to the bulb, but no effort should be made to withdraw it by dragging on the tube.—*American Journal of the Medical Sciences*.

POTASSIUM NITRATE IN THE TREATMENT OF PHLEGMASIA ALBA DOLENS.

Hovnanian describes his use of nitrate of potassium in this affection in the *Medical News* of July 28, 1894.

It has fallen to his lot to treat three well-marked cases of phlegmasia alba dolens with potassium nitrate with such gratifying results as to seem to justify publication.

Mrs. H., twenty-three years old, was delivered of her first child by her family physician with instruments, and sustained extensive lacerations of the cervix uteri and perinæum, which at the time were not repaired, but were left for a secondary operation. Twelve days after delivery she complained of pain and heaviness in the left leg, and within three days there developed well-marked phlegmasia. On the fourth day of this complication the writer saw the patient in great agony, with a temperature of 105.2° F., a pulse of 130, and respirations 25. The limb was so turgid and swollen that there seemed to be great danger of gangrene or rupture. The woman was at once given morphine sulphate ($\frac{1}{3}$ grain) hypodermically, and her limb was wrapped with cotton and placed on a feather pillow at a very obtuse angle. Hovnanian then prescribed a solution of potassium nitrate in water, representing 5-grain doses, to be given every hour until his return. Seven hours later he found his patient in better condition, with a temperature of 103° F., a pulse of 112, and respirations 22, and with less pain and discomfort. The swelling seemed to be less tense and the veins less engorged. The nitrate was continued as before until morning, when he found her in yet better condition. She had slept well during the night, although she had been wakened regularly for her medicine. Her temperature was 100° F., her pulse 95, her respirations 20. The swelling was reduced to less than half, and the returning circulation was fairly well established. There was no pain whatever, and but slight tenderness on pressure. The medicine was continued every two hours during the day, until the author saw her late in the evening, with a temperature of 99° F., a pulse of 90, and respirations 18. The swelling had almost entirely gone, and everything was in good condition. The nitrate was continued for two days in smaller doses, and at longer intervals, and then discontinued.

Two other equally typical cases are also recorded in this paper.—*Therapeutic Gazette*.

SURGERY

IN CHARGE OF

L. M. SWEETNAM, M.D. Tor.,

Lecturer on Therapeutics in the Woman's Medical College; Surgeon to the Outdoor Clinic, Toronto General Hospital; Surgeon to St. Michael's Hospital;

AND

A. PRIMROSE, M.B., C.M. Edin.,

Surgeon to the Hospital for Sick Children. etc.

OBLITERATIVE ARTERITIS IN A BOY FOURTEEN YEARS OF AGE.

An unusual case of this interesting condition, occurring in a young boy, is reported in *The Lancet* by Mr. B. W. Bond, M.B. The case is thus reported by Mr. Bond:

"A boy fourteen years of age came to me suffering from a sharp attack of 'shingles,' extending round the left side of the chest and back. He was evidently in bad health, and on taking his left wrist to feel his pulse I discovered that none could be felt. No pulse could be felt anywhere in the left upper extremity until the subclavian was reached. Here the beat was synchronous with that of the right subclavian, but much feebler. The radial and brachial arteries could be felt as cord-like bodies. On questioning the boy, he said that beyond occasionally having 'pins and needles' in the left arm and fingers he had felt no inconvenience whatever, and, in fact, he was unaware of the condition. He usually suffered from chilblains during the winter months, especially on the feet. The collateral circulation was evidently good, for beyond a slight blueness of the fingers there was no other visible sign of deficient nutrition. The temperature of the fingers was practically the same on both sides, and there was no anæsthesia. As regards cause, there was no sign of cervical rib or other pressure on vessels, the heart sounds were normal, and no specific or rheumatic history could be obtained. There were no signs of congenital syphilis elsewhere. The pulse in the right radial was normal, and no undue thickening of arterial walls could be felt. The interest of the case lies in the early age of the patient. I have seen a similar condition at the age of twenty-three and twenty-four years, but believe it to be rarely seen in a patient as young as fourteen years."

DEATH UNDER NITROUS OXIDE GAS DUE TO TIGHT-LACING.

More than one fatality from tight-lacing has recently been noticed in our columns. In all conditions in which free respiration becomes a necessity, if the vital processes are to be carried on, tight-lacing means death. Of all states, that in which a patient takes an anæsthetic is the one when absolute freedom of breathing is a necessity. Unhappily, but few know this elementary fact in physiology, and hence the sad death of a girl who had taken nitrous oxide gas at a dentist's rooms, and while recovering from its influence had a fatal attack of syncope. The statement is made that her stays were five inches too small for her natural body, a disparity of shape which, we imagine, the dentist might have seen and acted upon before he ventured to give the unfortunate girl nitrous oxide gas.—*Lancet*.

LIGATURE OF THE CAROTID ARTERY FOR CEREBRAL HÆMORRHAGE.

It will be remembered that some time ago, in a series of experiments on monkeys, Mr. Horsley and Mr. Spencer found that hæmorrhage in the basal ganglia could be controlled by ligature of the common carotid artery, and they suggested that ligature of the artery was a procedure which might be adopted in cases of ingravescient apoplexy. In a recent number of the *American Journal of Nervous and Mental Diseases* Dr. Dercum and Dr. Keen, of Philadelphia, relate two cases which have a considerable amount of interest with reference to this point. The first was that of a man aged fifty, who on the morning of February 11th had experienced a slight weakness of the left arm. In the evening of the same day there was also noticed some weakness of the left leg. Medical advice was now sought, and wet cups were applied to the back of the neck, a purgative was administered, and ergot and bromides were given. On the following day the one-sided weakness was slightly greater, on the day after it increased, and was apparently becoming steadily worse at the close of the fourth day from the onset, when there was complete motor palsy of the left arm, decided weakness of the corresponding leg, and paralysis of the lower half of the left side of the face. There was no affection of sensation, and no headache, only a dull feeling in the head, and slight giddiness, without any obscuration of intelligence. The urine contained a small quantity of albumin. It was thought that the condition was most likely one of ingravescient apoplexy, and Dr. Keen was asked to ligature the common carotid artery on the right side. This was done, cocaine only being used locally. No increase of the paralysis was observed after this, and two days later an appreciable improvement had taken place, the patient being now able to move his left hand and fingers. Improvement continued, and the condition at the end of two months showed a slight spastic condition of the left leg, with drooping of the left side of the face, and weakness of the left hand

and arm. There was no anæsthesia, and the mental condition was in no way impaired. The second case was that of a man attacked at two o'clock one afternoon with weakness of the left arm. The same evening the weakness was greater, and had involved the leg and face on the same side. Ingravescient apoplexy was diagnosed, and ligature of the common carotid artery decided upon, but before it could be carried out it was late at night, and the paralysis had deepened and unconsciousness had supervened. The operation failed to relieve the patient, however, and he died a few hours later. The publication of these cases will direct attention anew to a subject of much practical interest and importance. It is obvious that, in reference to any operative procedure in such cases as those here related, the great question is one of diagnosis. However likely the diagnosis of increasing hæmorrhage was in the first case, even the success which followed the operation does not absolutely settle the question; and it cannot be asserted that the success was more than a subsequent fact. It is unfortunate that no necropsy was obtained in the second case.—*Lancet*.

THE CALIBRE OF THE HUMAN INTESTINE.

In communicating to the Société de Chirurgie the results of some experiments he had carried out on dogs with Murphy's anastomosis button, M. Chaput made a statement* which seems to us to open up a field for speculation, if not for enquiry. Basing his opinion on numerous measurements of the human intestines, the distinguished French surgeon informed his audience that the twenty-seven millimetre button is far too bulky for the small gut in general, and especially for the lower end of the ileum. Of the three sizes, he prefers that which is about equal to twenty-one millimetres in diameter; it is the smallest, and adapts itself to the situation more readily than the others. Now, the questions suggested by M. Chaput's remarks are these: Do American citizens, as a rule, possess more voluminous intestinal tracts than their French congeners, and, if so, how far is cookery responsible for the difference? It is, of course, notorious that French cooking is the best in the world: has this fact any bearing upon the presumably small calibre of the French bowel? Digestion being made easy, so to speak, is it the case that a partial arrest of development has been the consequence? Is there also discrepancy as regards the length between the *primæ viæ* of the two nationalities? Savages are endowed with magnificent mouth furniture, and dental decay is sometimes said to be a product of civilization, dependent to a great extent upon knives and forks! Has the human race any reason to dread analogous deterioration as a corollary to elaborate cookery? Finally, and by way of closure to these *obiter dicta*, are dainty dishes a physiological mistake?—*Lancet*.

* "Gazette Hebdomadaire des Sciences Médicales de Bordeaux," No. 47, November 25th, 1894.

GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

EDMUND E. KING, M.D., Tor., L.R.C.P., Lond.,

Surgeon to St. Michael's Hospital; Physician to House of Providence and Home for
Incurables; Assistant Pathologist, Toronto General Hospital.

FURTHER EXPERIENCE IN THE EFFECT OF SIMULTANEOUS LIGATION OF BOTH INTERNAL ILIAC ARTERIES FOR HYPERTROPHY OF THE PROSTATE GLAND.

Dr. Willy Meyer read a paper with the above title before the section on Genito-Urinary Surgery, New York Academy of Medicine, December 11, 1894. He stated that this method of reducing the size of the enlarged prostate was first introduced by Dr. Bier, of Kiel, whose experience with the operation was published in the *Wiener klinische Wochenschrift*, August 10, 1893.

Up to the present time, Dr. Meyer has performed the operation three times. The first one, which was performed on October 5, 1893, was reported in the July (1894) number of the *Annals of Surgery*. In that case, several days after the operation there was secondary hæmorrhage, due to pressure necrosis of the external iliac artery, which necessitated tying off the common iliac. Soon after this, gangrene of the toes and part of the metatarsus developed on one side, which later on required amputation of the anterior portion of the foot. So far as the effect of the operation on the prostate was concerned, the result was very satisfactory. Twelve hours after the operation the patient began to pass his urine voluntarily in a very thin stream, and during the following two weeks he frequently voided small quantities through the urethra, but he also had to be catheterized. The improvement gradually continued, and he is at present able to hold his urine for two hours and then pass ten or twelve ounces in a forcible stream.

The second case was operated on May 21, 1894. The patient was a man aged sixty-three years, who suffered from retention of urine due to hypertrophy of the prostate. A single silk ligature was placed around each internal iliac artery within its sheath and tied. The two wounds

were then sutured with catgut, layer by layer. There was no reaction after the operation, and the wounds healed by primary union. During the night following the operation the patient voided his urine a number of times in a fine stream. Retention did not again set in. On the fifth day he suddenly developed subnormal temperature without any apparent cause, and died in a comatose condition on the eighth day.

In the third case reported only the left internal iliac was successfully tied, and this was followed by decided atrophy of the corresponding side of the prostate gland.

Dr. Meyer said he will continue doing this operation in suitable cases, namely, patients with "recent" retention, where marked dilatation with atony of the bladder has not yet set in. The operation is not at all difficult if the patient is placed in the Trendelenburg posture, and the artery can be tied on both sides within one hour. In tying it he employs silk, one ligature being sufficient, after having opened the sheath of the artery. The wound should be closed entirely by means of buried sutures. The operation should be an extraperitoneal one.

In conclusion, Dr. Meyer said that if further observations prove equally satisfactory in regard to the final result of simultaneous ligation of the internal iliacs, this must necessarily become the standard radical operation for hypertrophy of the prostate. It leaves the parts in their normal anatomical relation, and removes the obstruction in the simplest way—*i.e.*, by producing progressive atrophy of the organ which causes the obstruction. It also keeps the patient in bed for only ten to fourteen days, the wounds healing by primary union under the first dressing.

Dr. Samuel Alexander expressed the opinion that in patients with atheromatous arteries, tying off the internal iliacs might cause dangerous secondary hæmorrhage. While cutting off the blood supply in this way tends to produce atrophy of the prostate, still he thought the operation, for the present, at least, should be presented to the patient, not as a recognized surgical procedure, but as a physiological and surgical experiment.

Dr. Fuller said he agreed with the views expressed by Dr. Alexander. In most of these old patients with enlarged prostate there is a condition of general arterial sclerosis, and by cutting off so large a portion of the blood supply of the lower extremities gangrene might be produced.

Dr. C. W. Allen said that the operation of simultaneous ligation of both internal iliacs for the relief of a hypertrophied prostate is certainly a fascinating one, both for the surgeon and the patient. If further experiments show that its performance is not followed by gangrene or other untoward results, he saw no reason why the operation should not take its place among other well-recognized surgical procedures.

Dr. Meyer, in closing the discussion, said that the recent investigations of Bier have shown that arterial sclerosis is not of very frequent occurrence. The danger of secondary hæmorrhage is slight. While the operation must still be regarded as an experiment, still, all operations when first undertaken were experiments. The gangrene of the foot which occurred in one of the cases reported in the paper was not due to tying off the internal iliacs; in that case the common iliac was tied. In the future he would not perform the operation on patients over the age of sixty. It is, of course, not applicable to all cases; some patients with hypertrophy of the prostate must be relieved in one way, others in another.

Dr. R. Guiteras exhibited a small plug which, he stated, he has found very serviceable in cases where the catheter is left *in situ* for longer or shorter periods. It is inserted into the outer end of the catheter, and prevents the dribbling of urine. The plug, which is made by Tiemann, is graduated so as to fit almost any sized catheter.—*Journal of Cutaneous and Genito-Urinary Diseases*.

[NOTE.—The surgery of the prostate is occupying a considerable amount of attention at the present time. Any rational procedure that will give permanent relief in the exceedingly troublesome disease is worthy of the fullest investigation. In the light of recent investigations by White, of Philadelphia, Belfield, of Chicago, and others whose procedure is far less severe than the above, I am of the opinion that the sentiment expressed in the discussion will prevail. The record of the three cases quoted is not inviting.—E.E.K.]

SUDDEN DEATH IN CONSEQUENCE OF A URETHRAL INJECTION OF COCAINE.

In the *Centralblatt für Chirurgie* for March 10, we find an abstract of an account published in *La France médicale* by M. Reclus, of a case in which sudden death followed an injection of about six drachms of a five per cent. solution of cocaine into the urethra. The urethral mucous membrane appeared to be quite intact, and the death was attributed to pronounced arterio-sclerosis and to the undue quantity of the drug employed.

[In the above case, 15 grains of this drug are used—a dose so large that no excuse can be offered. I have seen syncope follow 2 grains injected in the urethra, and unpleasant symptoms follow 1½ grains; while no systemic symptoms have shown in 3-grain injections.—E.E.K.]

PÆDIATRICS AND ORTHOPÆDICS

IN CHARGE OF

W. B. THISTLE, M.D., L.R.C.P. Lond.,

AND

B. E. McKENZIE, B.A., M.D.,

Lecturer on Orthopædics and on Surgical Anatomy in the Woman's Medical College, and
Surgeon to the Victoria Hospital for Sick Children, Toronto.

GASTRO-ENTERITIS IN INFANTS.

From examinations of the blood of infants suffering from gastro-enteritis, conducted in Professor Epstein's clinic at Prague, and recorded in the *Lancet*, A. Czerny and P. Moser think that this affection is to be regarded as a general infection of intestinal origin. It is, therefore, different from dyspepsia, in which the disease remains limited to the gastro-intestinal tract. Thus, out of fifteen cases of gastro-enteritis in which the blood was examined during life, in twelve the presence of micro-organisms was ascertained. On the other hand, in only two out of thirty healthy children were cultures obtained from the blood, and of eleven infants suffering from dyspepsia only one yielded that result. The microbes found circulating in the blood in subjects of gastro-enteritis comprised staphylococci, bacterium coli commune, bacillus pyocyaneus, and bacterium lactis aerogenes, all of which are known to occur in the intestinal contents. It is pointed out that this variety in organisms concords with the multifariousness of the symptoms of gastro-enteritis, whilst it shows that prophylactic measures are more hopeful than therapeutical, the value of which latter must depend on the kind and intensity of the general infection.—*Maryland Medical Journal*, 1895, xxxii., 363.

ANTIPYRIN IN LARGE DOSES IN EPILEPSY AND CHOREA.

McCall Anderson, in the *British Medical Journal* of Dec. 1st, 1894 advocates strongly the use of antipyrin in large doses in the treatment of epilepsy and chorea. He is opposed to the idea that antipyrin is a dangerous drug, and claims that very large doses can be given without the slightest difficulty, if only the initial dose be not too large and the large

dose gradually reached, commencing, say, at ten grains three times, and raising one grain in the dose daily.

As examples of results obtained from the use of antipyrin in large doses, the following cases are given :

CASE 1. Boy, æt. 9 years, suffering from fits of two and a half years' duration. At the beginning of the illness he had fits very frequently, and after some months they gradually lessened until completely gone. He remained well for fifteen months, but seven months before admission they returned, commencing with one fit in twenty-four hours, and increasing until they amounted to forty and fifty in the day. The seizures were of the ordinary epileptic type, some followed by clonic spasm. Treatment began on December 20th, and consisted of rest in bed, regulation of bowels, and the exhibition of antipyrin, beginning at five grains three times a day, and increasing the dose by one grain every day. On January 9th twenty-five grains thrice daily were reached, and this dose was continued until January 16th, when the dose was reduced to twenty grains three times a day. From date of admission, December 12th, until December 20th, the daily average of fits was 16.5 ; from that till December 30th, 13.2. On December 31st and January 1st there were eleven fits ; on January 2nd and 3rd there were ten fits, and on January 4th three. They ceased until January 28th, when there was one slight fit. For twelve days before the 28th the dose of antipyrin had been lowered. The antipyrin was gradually increased again to twenty-five grains thrice daily. No further fits. Patient discharged quite well on March 1st. He continued taking antipyrin at home, and a letter from the father, dated March 12th, stated that up to then he had had no recurrence.

CASE 2. Boy, æt. 12, admitted October 10th, 1892. Suffering from second and severe attack of chorea. Has not improved as before, and has been under treatment at a dispensary since June. The movements are quite marked and incessant. He spills at least part of the water he attempts to swallow. There is slight difficulty in speech and a faint systolic murmur. The case was treated by antipyrin. On October 11th he received fifteen grains in three doses, and as the drug agreed well it was rapidly pushed. On the 13th he had thirty grains ; on the 15th forty-five grains ; on the 17th sixty grains, and so on, until on November 14th he was taking fifty grains three times a day. He was about a fortnight under treatment before the symptoms began to abate, when he was getting thirty grains thrice daily. He left the infirmary perfectly well on November 25th, the dose having been maintained at fifty grains three times a day until his dismissal. He was instructed to gradually diminish the dose and has since remained well.

CASE 3. Female, æt 12. Admitted December 17th, 1892, with a violent attack of chorea of a month's duration. This was the third attack.

She has extremely violent movements. Cannot walk or sit on a chair. It was necessary to lie her down in bed. On December 17th she took in all twelve grains of antipyrin; on the 18th she took ten grains thrice daily; on the 19th, fifteen grains; on the 21st, twenty grains; on the 25th, twenty-five grains; January 6th, thirty grains; January 12th, thirty-five grains; January 16th, forty-five grains three times a day. Drug not increased any further, as there was slight headache and sickness. Improvement was very rapid. She was able to sit by the fire on January 7th. Movements still persisted, but they became very slight, and were confined now to the left leg and hand. After January 16th the drug was twice stopped for a day owing to sickness. On January 23rd the dose was reduced to forty grains thrice daily, and Easton's syrup was given. The dose was then gradually reduced. Slight movement of the right hand persisted for a time, but this also finally disappeared. She was dismissed quite well on March 7th, 1893. Mr. Anderson sums up his experience in the following aphorisms:

(1) Antipyrin is not the dangerous drug some observers have led us to suppose.

(2) It may be given with safety in large doses, even in case of children, in most cases, although the initial dose must be small, and it must be slowly and cautiously increased.

ICE CREAMS AND BACTERIA.

In the *Medical Record*, 1895, xlvii., 168, Her Klein gives results of examination for bacteria of ice cream sold in the streets, and also of the water in which the glasses were washed. In all, six samples were examined, and in each immense numbers of pathogenic and other germs were found. So abundant were these organisms that the author asserts that in this respect the ice cream was not inferior to ordinary sewage. Many of the forms identified bore striking resemblance to those diagnostics of typhoid fever. In view of these facts the importance of supervision of food materials of this kind cannot be overestimated.

PATHOLOGY

IN CHARGE OF

JOHN CAVEN, B.A., M.D., L.R.C.P. Lond.,

Professor of Pathology, University of Toronto and Ontario Veterinary College; Pathologist to Toronto General Hospital and Home for Incurables.

ASSISTED BY

JOHN A. AMYOT, M.B. Tor.,

Demonstrator of Pathology, University of Toronto; Assistant Surgeon to St. Michael's Hospital; Physician to House of Providence.

THE MICRO-ORGANISM OF CHRONIC RHEUMATISM.

Schüller (*Medical Record*, September 23, 1893) has found a specific bacillus for chronic rheumatism. The organisms are described as measuring $2.6 \times 0.85\mu$, and are constricted at the middle. They stain well with carbol-fuchsin, but are easily decolorized by acids. They are said to grow fast at 25°C . in the dark. All the ordinary culture media are fitted for their development. Schüller inoculated the joints of rabbits with cultivations obtained from human joints, and succeeded in producing a non-suppurative arthritis analogous to the rheumatoid arthritis affecting man. The chronic rheumatism seems to be an entirely different disease from the acute, from which Schüller has only succeeded in cultivating staphylococci and streptococci, never the specific bacillus described above.—*University Magazine*.

ON TRANSMISSIBILITY OF CANCER FROM MAN TO ANIMALS.

M. Boinet, after a long series of experiments on the transmissibility of carcinoma from man to animals, states that after having made repeated inoculations on the rat, the rabbit, and the guinea-pig, he concludes that histologic examination of the lesions which resulted does not authorize him to pronounce in favor of such transmission.—*Semaine Medicale*, November 3.—(*Journal of American Medical Association*.)

THE ECLAMPSIA BACILLUS AND ITS RELATION TO PUERPERAL ECLAMPSIA.

Gerdes (*Deutsche med. Wochenschrift*, xviii., p. 603) succeeded in cultivating, from the serous contents of the abdomen, pleuræ and subdural spaces, as well as from the liver, kidneys, spleen, lung and aorta blood, of

a patient dead of puerperal eclampsia, a peculiar and characteristic bacillus. The colonies appeared as little points in twenty-four hours. Microscopic examination of the organs mentioned showed immense numbers of the bacilli. Experiment proved the bacilli infectious.

The author is of the opinion that the decidua is the primary seat of infection. The conclusions reached by him are as follows :

(1) The eclampsia bacillus is the only cause of eclampsia, and is not found in any other disease. There is no eclampsia without bacilli. The infection takes place from the uterus, probably from an endometritis which existed before the time of conception.

(2) The convulsions which take place from other causes at the time of birth must be most carefully separated from eclampsia, and are shown by post-mortem examination to be entirely different.

(3) Eclampsia is a very distinct and characteristic disease.

(4) The severe changes which the organs of eclampsia patients suffer cannot be explained on the ground of the demonstration of the specific micro-organisms. Probably they are the direct or indirect result of the toxins of the eclampsia bacillus.

THE EXAMINATION OF STREET DUST FOR TUBERCLE BACILLI.

Marpmann (*Centralbl. f. Bakt. u. Parasitenk.*, August 25th, 1893, Vol. xiv., No. 8, p. 229) observed that in old sputum the tubercle bacilli no longer presented their characteristic shape and appearance, but presented the appearance described as an "involution form." Further than this, the bacillary form sometimes entirely disappeared, the bacilli appearing only as granules, which stained by the characteristic methods. Marpmann conceived that tubercle bacilli might be present in the atmosphere in this granular form, and by carefully investigating the dust of various streets discovered that these granules were present sometimes in considerable numbers.

The method employed was as follows : The dust was collected in the morning, and allowed to digest in water at 40° C. for about an hour, filtered through a woollen cloth, and the filtrate, of which there should be fifty cubic centimetres, mixed with about ten drops of ammonia carbonate solution. After some time a precipitate of ferrous oxide and earthy carbonates is found. The precipitate is allowed to collect in a pointed glass, or is separated by a centrifugal machine, and stained with carbol-fuchsin in the ordinary way. When old sputum is examined by this method, the number of granules is large. In dust each cover-glass contains a very few, say five to ten.

Satisfied that these bodies represented the tubercle bacilli, Marpmann determined to test their vitality, and making use of the discovery made

by Vißmann, that the tubercle bacilli could resist prolonged exposure to steam, succeeded in obtaining from street dust pure cultures of the tubercle bacillus.

The dust was first subjected to a careful investigation for the presence of the granules mentioned above. If they were found, the following method of cultivation was attempted. The dust was digested in water, filtered, precipitated, etc., as above, and then inoculated into a culture medium, after which it was boiled for an hour. From this boiled mixture tubes of bouillon and agar were inoculated, and, after being filled with an atmosphere of pure oxygen, were hermetically sealed, and stood in the incubator for four weeks. At the end of this time examination showed the bouillon sterile and a growth of tubercle bacilli on the agar.

These discoveries are of great importance to students of hygiene, and show what disastrous consequences the expectoration of tubercular sputum upon sidewalks may cause by dissemination of its contained micro-organisms.

TUBERCULOSIS OF THE STOMACH.

Edward Przewoski has observed five cases of this affection, finding the tuberculous ulcers to be usually located in the pyloric region, though sometimes met with in other parts of the mucous membrane. Generally there was but one ulcer; rarely, several ulcers were united into one large ulcerating surface. In all five cases there was at the same time a tubercular affection of the lungs, of slow progress; and the author believed the gastric affection to be due to tubercle bacilli from swallowed sputum, the predisposing causes in the stomach being (1) chronic catarrh, with diminished acidity of the gastric juice; (2) the abundance of lymphatic nodules in the mucous membrane, especially in the cardiac and pyloric regions; (3) the length of time which the gastric contents containing the tubercle bacilli remain in the stomach; (4) accidental injury or rupture of the mucous membrane. Gastric ulcers differ from intestinal ulcers in that the submucous tissue plays the principal rôle, the muscular and serous tissues rarely being involved, while there are comparatively few bacilli. Tubercular ulcers of the stomach have little clinical significance unless followed by hæmorrhage or perforation, which is rare.—*Brodowski's Festschrift*, Warsaw, 1893.—(*Universal Medical Journal*.)

HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

WILLIAM OLDRIGHT, M.A., M.D. Tor.,

Professor of Hygiene in the University of Toronto; Surgeon to St. Michael's Hospital;

AND

E. HERBERT ADAMS, M.D., D.D.S.

Assistant Demonstrator of Anatomy, University of Toronto; Physician to Victoria Hospital for Sick Children; Clinical Lecturer on Diseases of Children in the Woman's Medical College.

TO SAVE THE BABIES.

The French Government, despairing of any hope to increase the birth rate of that country, is now devoting its energies to saving those already born. The new law forbids, under a severe penalty, any one to give infants under one year any form of solid food unless such be ordered by a written prescription, signed by a legally qualified physician.—*Medical Herald*.

TRAINING ASYLUM ATTENDANTS.

The authorities of the Ohio State Asylum for the Insane are adopting the method of giving a course of lectures bearing on insanity to the attendants of the asylum. The purpose of the course is to more thoroughly acquaint the attendants with the duties they have to perform, with the responsibilities incident to their positions, and to give them a more adequate knowledge of insanity as a disease and its treatment from a scientific standpoint. Some such plan should be adopted with the attendants in the asylums of Ontario.

A LABORATORY NECESSARY.

Diphtheria, for instance, which of late years has become one of the most destructive diseases of urban life, is not readily distinguished in some of its forms from milder and non-contagious affections of the throat and air passages. This difficulty of detection sometimes leads to the infection of others not warned of the unrecognized danger; and then, too, in the treatment of diphtheria the life of a patient may hang on the few hours spent in developing the true character of the disease.

Fortunately, modern science enables us by the culture tube and microscope to discover the specific cause of certain diseases long before

their nature is manifested by the symptoms. In the nature of things this important work cannot be done by each practitioner for himself, and it is conceived that no more valuable service can be offered the community than that afforded in this direction by a properly equipped laboratory under the charge of experts in this branch of modern preventive medicine. By this means it is intended to put at the disposal of every physician the necessary agencies through which he can secure in a few hours the positive determination of any case of suspected diphtheria, and other diseases of a similar character, which may occur in his practice.—A. R. Reynolds, M.D., Commissioner of Health, Chicago, Annual Report, 1893.

TUBERCULOSIS.

Tuberculosis is at present receiving a great deal of attention, particularly in Massachusetts. The effect of the Cattle Commission's inspections in that state for the detection and destruction of infected cows is seen at the Boston yards in the improved quality of the animals received there from drovers. The inspections at the two yards revealed for the first two weeks a tuberculous proportion of about twelve per cent. Recently, however, the drovers have exercised more care in the selection of cattle designed for these markets, and the result is that late inspections show a much smaller per cent. of infected animals.

BOVINE TUBERCULÓISIS.

Considerable activity is being manifested by the public health authorities in some of the Eastern States in renewed attempts to exterminate tuberculosis in cattle. In New York, recently, thirty tuberculous cows belonging to a choice herd were killed at Elmira, but criticism is made that the commissioners take such action only upon the request of owners—usually of costly cattle for the protection of the remainder—and that no systematic inspection is made of the common dairy herds, which furnish the milk supply, and which are generally kept under conditions that favor the development of the disease. In Massachusetts such a systematic inspection has been begun, with the avowed purpose of examining every cow, bull, and calf, beginning at Cape Cod and extending westward until the whole state has been covered; the tuberculin test is employed, and every animal that shows the characteristic reaction is to be slaughtered forthwith. On the recommendation of its Sanitary Committee the Philadelphia City Board of Health has also adopted the tuberculin test, and, after sixty days' notice, any milk producer supplying the city who fails to furnish a clean bill of health for his dairy—based upon the results of this test—will be liable to have his milk supply rejected as suspicious and its sale prohibited.—*Journal of the American Medical Association.*

Editorials.

THE PATRONS' MEDICAL BILL.

THE Patrons of Industry decided that it was one of their most solemn duties to reorganize the medical profession of Ontario. Their leader introduced the now notorious bill to amend the Medical Act. We understand that a great deal of work was expended in its preparation, and that much assistance was derived from certain doctors. Who were the doctors consulted? Was there one respectable or reputable physician? No; it was deemed expedient to consult only men who had disgraced a profession which, in the interests of the Patrons and the public generally, should be kept as nearly respectable as human law can make it. The result in the Patrons' eye, we are told, was truly magnificent. No such bill had ever before been brought before the Legislature. Well—in a sense, they were right; and so thought an overwhelming majority of the members, who showed their thorough appreciation of its extraordinary qualities by suddenly killing it in a very inglorious manner (from a Patron's point of view).

Mr. Patron Haycock's marvellous production was printed and sent to the members of the profession throughout Ontario, who had thus ample opportunities for studying carefully the results of the combination of the inborn genius of the broad-minded Patron with the cunning and greed of the contemptible charlatan in what may have been considered by both parties to the contract a lofty labor of love. Our physicians have honored Mr. Patron Haycock by giving his bill some consideration, and have failed to recognize those beauties so eloquently depicted by that greatest of modern statesmen—Haycock. It is only fair to state, however, no matter what thoughtful and well-meaning doctors may think or say, that this same Patron Haycock has become celebrated, and that his mighty brain has evolved the sort of a bill that has never before entered into the comprehension of any Canadian statesman. Who but Mr. Patron Haycock could have done it? We know not. Will Mr. Patron Haycock be unknown to posterity? We think not. Will expecting mothers feel dis-

appointed because they cannot be delivered by cheap and ignorant midwives? Possibly they may. Will unborn babes turn in their mothers' wombs because they cannot hope to fall into the hands of cheap grannies? We are not certain. Will fond and loving husbands be sorry that their wives cannot be placed in the hands of ignorant old women during the pangs of labor? Perhaps—if they are very fond, and very loving, they may. Some will not. Will numerous classes of patients bitterly regret that they cannot be fleeced by the army of dishonest quacks that Mr. Patron Haycock's bill would have called into existence? Many will; and to such the illustrious Haycock will, probably, long appear to be the greatest would-be patriot and benefactor of modern times.

THE DISCUSSION IN THE LEGISLATURE.

THE discussion of the proposed Act in the Legislature was, though brief, very satisfactory. We have extracted, partly from *The Globe*, and partly from *The Mail and Empire*, a fairly good report, which we publish in this issue. The recently-developed statesman, Mr. Patron Haycock, the meteor from proud Frontenac, spoke, we are told, in his happiest strain. The majority of the Patrons listened to him with joy. The common members felt the solemnity of the occasion, and trembled. The reporters were visibly affected. The orator spared neither the Medical Council nor those Toronto doctors who were earning a livelihood by selling blank death certificates to undertakers at twelve dollars a dozen. One Patron, we are told, actually, for the moment, almost felt sorry that he had returned his railway pass; because he thought that he would like to travel round the country and tell the people what his great leader thought of a profession which the new party of patriots were going to reorganize.

It was quite a matter of surprise to the earnest but modest patriots to discover that the Premier was really not captured, either by their chieftain's eloquence, or the beauties of their reorganizing bill. He actually had the audacity to oppose it, to criticize it. He went so far as to say that the bill was not in the public interest. He expressed some extraordinary (as the patriots thought) opinions about the medical profession, to the effect that it was important, respectable, and honorable, and should not be revolutionized. He went further, and expressed the opinion that it should be kept respectable and honorable; he even objected to a lowering of its standards in any way. A tear rolled down the cheek of the Patron chief, tain when he went so far as to intimate that he had no sympathy with Mr. Patron Haycock's beloved friends—the impudent and dishonest quacks and scoundrels who desired mediæval free trade in medicine. Strange as

it may seem to the patriots, it happens that the respectable members of the profession, Grit and Tory alike, throughout the Province of Ontario, are ready to assert, without any hesitation, that Sir Oliver Mowat's speech on this Patron bill was able, manly, and statesmanlike in character—one of his best efforts in the House for many years. Strange—how people do differ about statesmanship! Well, Sir Oliver was bad enough, but Mr. Whitney, for the Opposition, “was something awful.” We may as well tell Mr. Whitney frankly that we have our own opinion about any member who will use such terms as a “squad of adventurers” in connection with such a Body of Men as the Patron Patriots.

THE COUNCIL DISCIPLINE COMMITTEE.

THE *Toronto World* has expressed the opinion that Mr. Patron Haycock's highest aim in life is to obtain cheap sugar and cheap obstetrics. We must all admit that there is something to admire in an aim so lofty. We are also informed that, in accordance with the customs of Mr. Haycock's cheap grannies in the outlying districts of Frontenac, the chief articles of diet for young infants are brown sugar and butter; and that, while it was the statesman's chief desire to make the sugar and the midwives as cheap as possible, he also had in contemplation an offer to furnish certain grades of butter at the lowest possible rates.

Whatever the truth may be as to these important items of detail, we cannot help thinking there was something in the patriot's bill that was even nearer and dearer to him than cheap obstetrics, viz., the clause which relieved his beloved friends from their greatest terror in life, the Discipline Committee of the Medical Council. Mr. Haycock's distinguishing characteristic, which even towers above his wondrous qualities of statesmanship, is his loyalty to his select coterie of medical friends, who desire free license to engage in conduct that is “infamous and disgraceful.” Mr. Haycock, who knows all things, of course knows that the licensed quacks and charlatans have a tremendous pull over the other fellows of the same kidney; hence his mighty and prodigious efforts to destroy that abnoxious abomination, the “Discipline Committee.”

There is, of course, something touching about that sort of loyal devotion to one's friends; but there happens to be, in this cold world, a number of people who fail to appreciate all the beauties of such nobility of character. There are several inhabitants of the province who actually think it undesirable, at the present, to remove any machinery which assists in any degree in preventing practitioners from doing that which is infamous and disgraceful.

MR. PATRON HAYCOCK'S SUPPORTERS.

WE feel that it is our solemn duty to place before the profession a list of those who stood by the patriot Patron Haycock in his efforts to secure cheap sugar, cheap obstetrics, and broad, free trade in medicine. As we understand the matter, fourteen out of fifteen who voted with the patriot were regular Haycockers, while one—Mr. Murdo Y. McLean—is not strictly speaking a Haycocker, but simply a high-minded, a broad-minded, and a deep-minded Grit, who occasionally leans towards Haycockism. Mr. Murdo Y. McLean lives in the town of Seaforth, in the south riding of the county of Huron. How would it do for the Huron and Bruce Medical Association to make Mr. Murdo Y. McLean one of its honorary members? Mr. Murdo Y. McLean possesses good parts, and lots of them, and might be able to give this active association some good pointers.

The following is a complete list of the Haycockers, together with Mr. Murdo Y. McLean, who is sometimes a Grit, sometimes a Haycocker, and sometimes both :

NAME.	POST OFFICE.	COUNTY.
John Bennett,	Tayside,	Stormont.
John Caven,	Picton,	Prince Edward.
Archibald Curry,	Creemore,	West Simcoe.
William Dynes,	Grange,	Dufferin.
Thomas Gamey,	Maxwell,	Centre Grey.
Joseph Longford Haycock,	Cataraqui,	Frontenac.
George N. Kidd,	Carp,	Carleton.
John S. McDonald,	Ripley,	Centre Bruce,
Alexander McLaren,	Melrose,	East Hastings.
Murdo Y. McLean,	Seaforth,	South Huron.
Daniel McNaughton,	Underwood,	North Bruce.
John McNeil,	Fullarton,	South Perth.
David McNichol,	Lam lash,	South Grey,
David McPherson,	Lancaster,	Glengarry.
William Shore,	White Oak,	East Middlesex.

TRINITY MEDICAL ALUMNI ASSOCIATION.

THE third annual meeting of the Trinity Medical Alumni Association, which was held in the Convocation Hall of Trinity University, Thursday, April 4th, was a very pleasant and successful affair. We publish elsewhere in this number a report of the proceedings. The programme

was an excellent one, and the various gentlemen whose names appeared responded promptly to the calls of the president, Dr. Geo. A. Bingham, at the hour named.

On the same evening, the annual banquet was held in the Rossin House, and was fairly well attended by members of the association and their guests. Among the latter were the visitors from the United States, and a few local physicians. A very enjoyable evening was spent, the speeches, *moral tales*, and songs being above the average. The association is evidently in good shape—well officered and well managed; and its friends think that its prospects of future success are of the brightest sort.

THE BUFFALO MEDICAL JOURNAL.

THE *Buffalo Medical Journal* was first published in 1845, and will be fifty years old in a few weeks. The worthy editor, Dr. William Warren Potter, who is so well and favorably known both in the United States and Canada, announces that he proposes to signalize its semi-centennial anniversary by increasing its reading pages from sixty-four to eighty, and by making other improvements that will contribute to its efficiency and keep it abreast of the professional progress of the period. We have much pleasure in extending to Dr. Potter our sincere and hearty congratulations, and desire to express our heartfelt wish that both he and his journal may for many long years to come be successful and prosperous in every way. The *Buffalo Medical Journal* has for a long time been generally recognized as one of the best American medical monthly magazines. It scarcely needed anything in the way of improvement, and, consequently the new efforts in that direction are all the more creditable because there has been no demand for them. Success to Dr. Potter and his fifty-year-old medical journal!

PROFESSIONAL RELATIONS WITH CRIMINAL ABORTION.

THE recent arrest of two respectable physicians of New York, on the charge of being accessories in a case of criminal abortion, has naturally excited much interest among the members of the profession of that city. A special meeting of the Medical Society of the County of New York was held on March 16th, and the question was discussed in all its bearings. We publish in this issue a report (*N. Y. Medical Record*), which will probably be quite as interesting to Canadian physicians as to those of the United States.

Two respectable members of the profession, and of the "Society," had attended a woman suffering from septicæmia connected with abortion in the house of a midwife. The patient and the midwife both denied having done anything to induce the abortion, which they said was probably due to

over-exertion. On the advice of the physicians the patient was sent to a general hospital, where she died in a few hours. She, fortunately, made an ante-mortem statement, exonerating the doctors and incriminating the midwife. The hospital authorities informed the police as to the circumstances, and the two physicians were arrested on suspicion of having been engaged in a criminal act. After they were brought before the coroner, it was soon found that there was absolutely no evidence against them, and, at the same time, there was every reason to believe that they were perfectly innocent.

One of the questions which naturally arises in connection with such an unfortunate occurrence, and which became prominent in the discussion of the New York Medical Society, was the old one often asked before: How far is a physician justified in adhering to the good old rule that he is not to reveal any secrets acquired purely through his professional work? Dr. Irwin, it will be seen in the discussion referred to, stated positively that he would not report cases of abortion under any circumstances, as he did not consider that he was called on "to play the detective."

We have a good deal of sympathy with such views; but, at the same time, desire to utter a word of caution. The general practitioner—especially the young practitioner—who does anything which may appear in the eyes of the law like an attempt to conceal a crime assumes a very serious responsibility in any case; and more especially is this true when he attends a patient in a house not altogether above suspicion—and not her own home. The woman under treatment in New York had gone from her own home to the house of an "advertising" midwife; she was suffering from septicæmia connected with an abortion; "lifting heavy tubs" was said to have produced both the abortion and the septicæmia. *Heavy-tub* theories in cases with shady surroundings should not be considered in all respects satisfactory. Any physician who has nothing better to rely on under such circumstances should hardly feel surprised if he gets into rather serious trouble. In all doubtful cases, the doctor should get the assistance of a consultant or consultants (the best possible), or, perhaps better, consult a competent and respectable coroner.

THE ONTARIO MEDICAL ASSOCIATION.

AS announced in our last issue, the next meeting of this association will be held June 5th and 6th, in Toronto. The two committees who have the principal work as to arrangements in hand give us good reports as to the prospects, which are said to be bright. We are requested again to ask members who intend to read papers, especially those living outside of Toronto, to send word to the secretary, Dr. J. N. E. Brown, 186 King street west, Toronto, as soon as possible.

THE PATRON MEDICAL BILL.

DEBATE IN THE ONTARIO LEGISLATURE.

MR. HAYCOCK moved the second reading of a bill to amend the Medical Act. He said it had been asserted the object of the bill was to permit free trade in medicine. On the contrary, its provisions were just as stringent and afforded as much protection to the public as the present Act. The final examination held by the Medical Council was said to be for the purpose of protecting the public. That duty should rather devolve upon the Government, and not upon an irresponsible institution like the Medical Council. The bill provided for a Medical Examination Board and an examination that should be uniform throughout the medical schools. He contended that the Medical Council extorted an exorbitant sum in fees out of the pockets of the students, and in return gave them nothing but an interest in an "unprofitable bit of real estate on the corner of Bay street." The Discipline Committee of the Medical Council enjoyed powers such as no body of that kind should enjoy. A medical man could be deprived of his right to practise for what the Medical Council deemed "unprofessional conduct." Thus they were given the right to define crime. If a man was guilty of unbecoming conduct, he should be tried by the ordinary courts of the land, and not by a Star Chamber body of this kind. The bill proposed to define what was unbecoming conduct on the part of a medical man. Incidentally, the speaker said he had been informed there were doctors in Toronto who sold blank certificates at \$12 a dozen to undertakers, and the latter filled in the cause of death themselves. The clause permitting midwives to be granted a certificate of competency after attending ten cases was not considered all-important. It was intended to apply to the outlying districts.

Mr. Stratton said if the bill were adopted it would be one of the most sweeping and injurious pieces of legislation that had ever passed the House. The Government had already enough to do, without assuming responsibility that now rested with the Medical Council. He criticized the leading provisions of the bill, and with respect to the change proposed in the amount of fees to be paid said no member would propose to suggest to the Grand Lodge of Patrons the amount of fee they should collect from subordinate lodges. The medical men were the best judges of the tariff

that should prevail. At present it afforded protection to the public. He protested against the adoption of any legislation calculated to weaken the standard of medical education. The bill was aimed directly at the medical profession, and he felt he should not be doing his duty unless he opposed it. He was quite satisfied that he would have the House with him in the amendment which he should move, seconded by Mr. Garrow, that the bill be not now read a second time, but that the order for a second reading be discharged.

Mr. Haycock immediately availed himself of the fact that the amendment put him in order, and spoke briefly in reply to Mr. Stratton. As for leaving the matter to the medical men, he said, they might as well wait till the manufacturers asked for a reduction of the protection given to them, or for the Senate to move for its own abolition. As for the statement that the legal profession has a similar control over its members, he replied that two wrongs do not make a right. Mr. Stratton's analogy between the medical tariff and the Patrons did not hold good; there would be some analogy if a law were proposed not allowing any man to practise farming unless he joined the Patrons. Mr. Haycock argued strongly on behalf of his bill, and concluded by seeking to move an amendment to the amendment to commit the bill to a special committee, but the Speaker ruled this out of order.

Sir Oliver Mowat said the bill appeared to him to be a bill which was not in the public interest, and which should not receive the approbation of the House. The medical profession was one of the most important of all the professions with which people had to do. It was a learned profession, and there was, he believed, no country in the world where it stood higher than in this province. It was an honorable profession, and in that respect it was, he thought, unsurpassed in any country in the world. The bill was revolutionary, and a strong case should be made out as to its necessity before the House should be induced to pass it. There were one or two features of it which he considered might be worthy of consideration, and perhaps the House might conclude to pass them. But it was the main principles of the bill which the House should look at. He agreed with the promoter of the bill that special legislation and special powers were given to the medical profession only for the better service of the public. He agreed, too, that the profession should be allowed to use them only so long as they were used for that purpose. Criticizing the bill, Sir Oliver replied to the statement that the fees paid by medical students upon entering their studies were too high. Without going into the details of whether they were or were not, he pointed out that at any rate they went to benefit the profession, and so eventually to the benefit of those who paid them. They did not go into some general fund belonging to the country, nor into some foreign fund, and they were appro-

priated by medical practitioners. The promoter of the bill had been specially severe in his criticism of the powers which the medical profession has of dealing with its own members. What were those powers? The fault or crime (to use the hon. member's words) which must be proved before a member can be stricken off the roll was something that amounts to a felony, something that amounts to a misdemeanor, or something that amounts to infamous or disgraceful conduct. Did the people of the province want felons practising among the medical profession, or men guilty of an offence which amounts to a misdemeanor, or of conduct which is infamous or disgraceful? Yet that must be shown before a name can be struck off the roll. The medical men were interested in purging their profession of that kind of persons. But since 1887 only nine cases out of the two or three thousand medical men had been tried under the authority which the profession have to try cases. Of these nine only four were convicted, and these only after repeated trials. And in these cases the evidence was so conclusive that only one ventured to avail himself of the power of appeal to a judge of the High Court. In this case the judge said that the offence was clearly proved, and he complimented the Medical Council upon the manner in which the case had been conducted.

Sir Oliver submitted that the whole case for the present bill broke down. There was no ground at all for a revolutionary proposal, no pretence that the power given to the medical profession had been abused, or that any one had been unfairly dealt with. There was, therefore, nothing to justify the House in supporting the bill, and he would, therefore, vote for the amendment. (Applause.)

Mr. Whitney supported the position taken by the Attorney-General, and in opposing the bill made a vigorous and free-handed attack upon the Patrons. He understood Mr. Haycock to wish to establish free trade in the practice of medicine. Mr. Haycock said he was opposed to class legislation, and yet he and those who acted with him owed their existence in that House to the class-legislation idea. Who had asked for the bill? No one, from Rat Portage to Glengarry. Last spring a squad of adventurers were let loose over the eastern portion of the province. They presided at oyster suppers with great unction, and grew sleek and fat. They told the farmers that the professions had special legislation, and that they were fattening upon the poor, down-trodden, and oppressed farmers. Occasionally they got people to believe them; and here now Mr. Haycock, not altogether master of himself, got up with this bill for fear these misguided people will call the instructors false prophets or something worse. The bill should be thrown out of the House without ceremony, and there had been times when bills like that were burned by the common hangman. (Laughter and applause.)

The vote was taken, and upon a vote of 15 to 71 the bill received the six months' hoist, only the Patrons as a body voting for it. Mr. McLean (Liberal) voted with them, while Messrs. Gurd (P.P.A.), Pardo (Patron), and Haggerty (Independent) voted with the majority.

Meetings of Medical Societies.

TRINITY MEDICAL ALUMNI ASSOCIATION.

THE third annual meeting of the above Association was held in Convocation Hall, Trinity University, April 4th. The attendance was large. The papers were interesting, but through lack of time those by Professor A. H. Ferguson, of Chicago, Ill., and Professor Roswell Park, of Buffalo, N.Y., were not discussed. Dr. George A. Bingham, of Toronto, presided.

SOME POINTS ON CEREBRO-SPINAL PATHOLOGY.

This was the title of a paper by Dr. Daniel Clark. He said that many morbid conditions of the body were due primarily to derangement of the nervous system. Too often the organic change, the result of the nerve lesion, received the practitioner's attention. The laws of repair operated upon the same principle in the nervous system as in other systems of the body. In treatment specifics were being replaced by therapeutic agents calculated to help the general system. Pathology had done much in advancing scientific principles of treatment. Much could be done by securing sanitary surroundings, administering nutritious food, attention to moral treatment; but it remained for the Master-builder to repair the waste places and to give tone to the flagging energies. The essayist pointed out the macroscopic and microscopic appearances to be seen in the brain and cord in various diseases of these structures, and also those seen in other organs of the body when at the same time abnormal conditions of the nerve tissue were observable, upon which these lesions in the other structures were probably dependent. Many of the dyspepsias were due to the existence of nerve derangements. The same could be said of Bright's disease, arterio-sclerosis, diabetes, spasmodic dysmenorrhœa, functional diseases of the heart, angina pectoris, and the various neuralgias. Puerperal mania was not always the result of sepsis, but eccentrically produced by impression on the cerebro-spinal system through the great sympathetic. The lesions in various skin, joint, and glandular affections were referred to nerve disturbances. The presence of amyloid material in the brain and cord was then referred to, and the retrograde metamor-

phoses which produced it pointed out. Syphilitic nerve lesions were discussed, and a contrasted view of the lesions in locomotor ataxia with those of paresis was given.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

Dr. Sheard took up this subject, demonstrating the various steps in the technique of obtaining cultures of the Klebs-Loeffler bacillus. He said the treatment of disease by antitoxins was not new. When germs were introduced into the body of an animal, they produced certain effete matter called toxine. In the blood of the animal the antitoxin was formed, which was an antidote to the toxine.

To get a culture, a smear should be taken from an infected throat and introduced into some medium, as gelatine, in which the organisms it contains will grow. They separate into different colonies—streptococci, staphylococci, etc., and the Klebs-Loeffler bacilli.

The doctor passed around tubes showing these various cultures, and pointed out the distinguishing features of the different colonies. A pure culture is made by placing some of the diphtheritic colony in bouillon, and allowing it to grow until the bouillon is saturated. By the old process this took three months; by the new about as many days, by the process introduced in France, of free aeration of the culture. (The apparatus for this was also shown.) Then, when saturation is complete, the separation of the germs is made by means of filtration through Pasteur's porcelain filter. (Filter presented for inspection.) The bouillon, which is aspirated through the porcelain vessel containing it into the surrounding vessel, contains no germs, and is injected in small quantities, repeated for some weeks, into the horse until no reactionary changes are seen in the horse; or, in other words, until he is immune. The horse's blood will now contain the antitoxin.

Dr. Sheard showed samples of three kinds of serum, and also the hypodermic syringe employed. The ordinary hypodermic needle was too small to use. This special syringe could be taken completely apart and sterilized. Absolute asepsis was, of course, necessary. The injection was made in the loin. It usually made a swelling about the size of a chestnut, but this disappeared in twenty minutes. He had not seen any serious local effects from its use. As it was harmless, an infant might be given as large a dose as an adult.

Dr. Sheard had used it in fifteen cases. These had been bacteriologically diagnosed. Statistics of antitoxin treatment would be misleading if this bacteriological examination were not made. The specific bacillus might be seen by examining a smear stained with methyl violet on a cover-glass preparation. But, if it could not be seen, then cultures should be made. The doctor showed tubes with probes tipped with sterilized cot-

ton, for the use of practitioners who wished to have examination made of smears from suspected throats. These would be examined gratis at the health department. The necessity of this examination of the membrane from the throats of patients sent to isolation hospitals was obvious. The distinctive features of the Klebs-Loeffler bacillus, as seen under the microscope, were pointed out. An easy means of differential diagnosis between the true bacillus and the pseudo was that cultures of the former would be found to be acid, of the latter alkaline. Of the fifteen cases, in three the diphtheritic bacillus was not found. In the twelve true cases the antitoxin was used seventy-two hours after the manifestation of the disease. There were five laryngeal, two tonsillar, the rest faucial and pharyngeal. Three of the laryngeal died. Mortality 25 per cent. The clinical phenomena following the treatment was then described. Recent German statistics given showed 11.1 per cent. mortality, a marked decrease over the old methods of treatment. But the speaker thought this might be attributed to the epidemic being milder. In those epidemics where the membranes examined showed the presence of the streptococcus longus, the mortality was very much more fatal than in those epidemics where this bacillus was not found. His opinion was that we are not yet in a position to pronounce upon the new treatment. In memory of their unsatisfactory experience with tuberculin, it would be unwise to decide as to its value until further investigation was made. Dr. Sheard extolled very highly the treatment of the disease (especially the laryngeal form) with fumigations of calomel, which method he described. Strong sprays of the bichloride of mercury (1:1000) were also highly commended. The peroxide of hydrogen was effectual in clearing out the pharynx and nasal passages, if filled up. But the membrane would rapidly form again. Alkalinized steam was helpful, as it counteracted the acid reaction of the toxin in the throat, and possibly lessened its virulence.

Drs. Price-Brown, Ernest Hall, and Pepler discussed the question.

AFTERNOON SESSION.

Dr. Joseph Price, of Philadelphia, presented a paper on

THE PHILOSOPHY OF ABDOMINAL AND PELVIC SURGERY.

The paper was a denunciation of surgical interference in pelvic disease from the vagina, which was coming into vogue in some quarters. He also attacked vigorously the resuscitation of the term pelvic cellulitis. Much error arose through the tendency many fell into of generalizing from isolated cases. Much of the paper was devoted to philosophizing on the necessity of having a proper conception of what had been done in the past, of accepting the good points and rejecting the bad; we should be proud of being successors of the brave pioneers that had pre-

ceded us. Wisdom was humble because she knew no more; knowledge was proud she had learned so much. Scientific emulation had too often been replaced by personal conflict, so that those who might have been agents of advancement became obstructionists. Such were those who resurrected pelvic cellulitis into the realm of pelvic pathology. The essayist deprecated the multiplicity of instruments for operation; the less paraphernalia the better. He also advised the strictest asepsis always. A person could not be spasmodically clean any more than he could be spasmodically pious. Adhesions were to be dealt with as they were found, and broken down with the finger only. All bleeding points should be carefully ligatured. In dirty cases the abdomen should be flooded. This was not only beneficial in cleansing, but was a powerful stimulant against shock. Drainage should be made through a glass tube, not by using gauze. The doctor closed his paper by referring to the judiciousness, care, and decision to be exercised for his success of operation and the welfare of the patient.

Dr. Temple said he would have preferred to have had Dr. Price discuss some specific operation; it would have opened up to him, at least, a better field for discussion. For many years Dr. Price had fearlessly declared the non-existence of pelvic cellulitis. He (the speaker) was not altogether a convert. That puerperal cellulitis did exist, he was quite satisfied in his own mind. He believed there were many diseases called cellulitis that were really pus tubes. He did not see how any surgeon could attack the abdominal cavity, knowing there might be large abscesses and many adhesions through the vagina. It could be reached by the abdominal incision much more easily. Of course, this did not apply to vaginal hysterectomy. Dr. Temple dwelt on other points brought out in the paper. He advocated the free use of soap and water for the hands of the operator and the assistants.

Dr. Kenneth Fenwick, of Kingston, said he believed there was such a thing as cellulitis. He had a case which threw some light on the subject—a case in which he had removed a pus tube a few months ago. The patient did well for three weeks. A tumor began to form in the region where the pus tube had been, similar to what one sees in parametritis after confinement. There was no doubt that pus was there. An opening was made by trochar through the vagina, and about two ounces of pus withdrawn. Dr. Fenwick considered that a case of cellulitis.

Dr. Price closed the discussion. Referring to his stress on asepsis, he said he did not wish to belittle the importance of antiseptics. But one operator had 122 amputations without a death. John Hunter did 158 ligations for aneurism without a death, before Lister was born. He spoke of the good results that came from operating in the morning. Operators who compared their mortality statistics found that morning operations

gave the best results. In the case of Dr. Fenwick the secondary trouble was due to ligature.

Dr. Price then spoke of fibroids. Somehow, he said, they behave badly nowadays—worse than years ago. They are not taking as good care of themselves as formerly. They slough and undergo retrograde changes, particularly during the last four years. The influenza, perhaps, had something to do with it—something, whether it is that or the faith cure. (Laughter.) He had found them slough, or undergo a sarcomatous change, even six or ten years after the menopause. Referring to the cellulitis again, he said: The character of inflammation differs. Compare that of a whitlow with that resulting from a post-mortem wound. Again, how much cellular tissue was there in the pelvis beside the small leaf of peritoneum of the broad ligament? He eulogized Emmet as an operator in plastic work. A man had no business to do this work until he sees Emmet. "Go and see him work. But," said Dr. Price, good-humoredly, "I don't think he knows much about pelvic work."

RADICAL CURE OF HERNIA.

This was the title of a paper by Professor A. H. Ferguson, of Chicago. He outlined the steps in the leading operations for the radical cure of hernia, pointed out their weak points, and then described his method, which combined the excellencies of the other methods, but contained none of their disadvantages. One reason so many operations for radical cure failed was because so little attention was paid to the pathology of the abdominal wall. In a study of the anatomy and pathology of the oblique inguinal variety there was first to be seen a dimpling at the internal ring, a congenital depression in the transversalis fascia at the origin of the cord at the union of the vas deferens and the vessels of the cord. As soon as this fascia was severed the hernial protrusion acted like a wedge, and the structures in the deep ring were forced asunder. The transversalis fascia in old cases was finally pushed downward, inward, and backward, until the lower border of the ring reaches the level of the pubic bone, forming an infundibuliform cavity. Operation should restore the deep ring to as small a size as possible without damage to the cord, and obliterate the funnel-shaped depression. McEwen was the first to recognize this. A second aim was to prevent relapses. He (McEwen) aimed at doing this by making use of the sac as a plug at the peritoneal aspect of the internal ring. He (the essayist) had found this sufficient where the internal ring was not large, nor the cord hypertrophied. But when the sac was small and the transversalis fascia at the deep ring much relaxed and low down, it (the sac) was not, he found, sufficient to fill the whole cavity at the seat of the rupture. But a small sac was better than none. McEwen

had done a post-mortem on a case where the rupture had been one of long standing. He found the canal was closed ; the large sac of fibrous tissue made a cushion which prevented the chance of a return of the hernia.

A third pathological condition was the overstretched condition of the transversalis fascia behind the cord, easily demonstrated by raising the cord from its bed. A fourth condition found is an increase in the bulk of the veins of the cord. To Halstead was due the correction of that by removing some of them. There was no doubt, if left, the enlarged cord predisposed to relapse. The condition of the muscular aponeurosis was another important point. Constant pressure for years causes them to become thin and overstretched. They become blended, and it is difficult to differentiate them from one another or from the sac, with which they form a strong union. The conjoined tendon may be forced inward, and Poupart's ligament downward and outward. The deep epigastric artery may be obliterated.

These several pathological conditions, he held, were not rectified by any one of the later operations. In Bank's objections are : The sac is removed, the infundibulum is not obliterated, the transversalis fascia is not restored, the internal ring is not lessened, the cord is not reduced in size, the abdominal aponeuroses should be secured as firmly in front as behind, relapses are frequent. In McEwen's, the sac acts as a tampon, and obliterates the funnel-shaped depression, the canal is closed by bringing the external layer of structures with one suture to overlap the conjoined tendon on the inner and upper side. Objections : A new ring may not be formed by the suture closing the canal ; the transversalis fascia is not restored behind. The spermatic cord is not reduced in size. The sutures closing the canal pass over the cord, and, if tied too tightly, endangers the vitality of the testicle. In McBurney's, the neck of the sac is ligated as high as possible. The skin is sutured to the deep fascia, and the wound packed with gauze. Objections : Sac is sacrificed ; presence of scar tissue, which weakens with age. The density of the transversalis fascia is not restored. The pathological internal ring is not lessened in size. The cord is not reduced, when large. Relapses are frequent. He then pointed out the features in one or two other operations, and their defects.

Coming to Halstead's, he pointed out the various steps ; in this the superfluous veins are removed. Objections : Sac is not utilized. The tightening of the six or eight sutures tends to cause internally a certain amount of concavity along the line of incision. The V-shaped depression where the cord leaves the abdomen is not guarded. There is too much cutting.

Referring to his plan, the essayist recommends an incision three or four inches in length, cutting through all the structures in front of the canal, without staining the tissues. It is not extended above the internal ring through the three abdominal muscles. The sac is then dissected out, and utilized after the mode of McEwen, occupying the position where the vas and the vessels meet. If there are too many veins, the excess are removed after Halstead. The slack, if it exists in the transversalis, is taken in one bite of the needle, being parallel to Poupart's ligament, another parallel to the conjoined tendon. This throws a ridge inward at the line of suture. The abdominal aponeurotic structures are sutured together. A number of sutures are taken, like in McEwen's, with one big suture, including these structures, so that when tightened there is overlapping of the external over the upper and internal.

The doctor then outlined the way he performed the radical cure in femoral hernia. The paper was accompanied by charts giving a comparative view of the different operations, and the phases of the method he employed.

Dr. Roswell Park read a paper on

INFECTION WITHIN THE CRANIUM.

The paper, which dealt with the subject in an elaborate manner, was cut short by the arrival of the hour for convocation. It dealt with the adjoining cavities as a source of infection, and their connection with brain cavity, and also with the various infective diseases of the membranes, and of the brain tissue, their pathology and symptomatology.

For lack of time there was no discussion of the last two papers.

TORONTO MEDICAL SOCIETY.

March 14th, 1895.

The president, Dr. Peters, in the chair.

EMPYEMA.

Dr. Williams, of West Toronto Junction, presented a patient upon whom he had operated for empyema. The child was aged eighteen months, and suffered from an attack of pneumonia in July last. It terminated in an empyema. During this attack the temperature ranged from 99° to 102°. There was dullness from the clavicle down to the base of the lung. The heart was displaced, the collection being in the left pleura. Aspiration revealed the nature of the contents. The incision was made in the ninth interspace, below the scapular angle. The pus was sweet.

There was no washing out, nor special antiseptic precautions, as the surroundings were exceedingly unsanitary. A perfect recovery took place in two weeks.

Dr. N. A. Powell thought such a good result so soon was exceptional. He thought there would be some danger in operating so low down. The patency of the opening might be difficult to maintain, and the diaphragm might be in danger of injury in case of aspiration. He spoke highly of the use of creolin as a washing-out fluid in cases where the pus was nonlaudable and irrigation was resorted to.

Dr. Geo. A. Peters pointed out that the diaphragm would likely be out of reach of the needle if the fluid were sufficient to press it down.

EXTRA-CAPSULAR FRACTURE.

Dr. C. Scadding reported the history of a case of extra-capsular fracture in an old woman aged ninety-two. No treatment was adopted but rest in bed. The old woman, being restless and mentally deficient, threw herself out of bed twice soon after the fall that occasioned the fracture, falling on the affected hip. However, after lying eight weeks, union took place.

Dr. F. Winnett, who did the post-mortem, presented the head of the femur, showing how union had taken place. The impaction was well shown. In most cases of this kind the great trochanter is fractured, but in this case it was not. There was also an absence of large processes of bone, which are invariably thrown out along the inter-trochanteric lines.

Dr. Williams said that the woman must have had a great deal of vitality, for at that age, with such a fracture and the necessity of keeping the recumbent position so long, there was a danger of her dying before union took place.

A PEDUNCULATED TUMOR.

A pedunculated tumor was presented by Dr. Powell, which he had removed from the gluteal region of a woman aged 65. It was superficial, pedunculated, and appeared like a fungating sarcomatous mass before removal, but on gross examination it appeared more of a fibrous character. He would present microscopic specimens at a later meeting, when the nature of the growth could be more positively ascertained.

MITRAL STENOSIS.

Dr. A. H. Garratt presented a heart showing mitral stenosis. He related briefly the history of the case. The woman suffered extremely from precardial pain and dyspnoea, despite everything he administered to relieve her. He had aspirated the peritoneum and the oedematous legs, withdrawing a quantity of fluid. There was no history of rheumatism in the case.

Dr. George A. Carveth said he had seen it stated that these cases do not die after exertion, as is commonly supposed, but after lying quietly in bed.

Dr. E. H. Adams said that, after following the history of a number of these cases, he had come to the conclusion that it was a wise thing to warn patients with heart disease to be careful as regards exercise; that their lives would be prolonged by so doing. He outlined the history of two of three cases he had observed.

Dr. A. H. Garratt said that he considered exercise a very necessary element in the treatment of such cases. The fresh air was very helpful to the respiratory functions.

Dr. R. J. Dwyer presented a heart showing a condition of mitral stenosis, with dilated and hypertrophied left auricle. Unlike Dr. Garratt's case, it caused absolutely no symptoms. The woman died from nephritis of the chronic interstitial variety, from which she had been suffering for eight years. He also showed the kidneys, which were large and red in color. The capsule was adherent. He outlined the symptoms. Another kidney was shown by Dr. Dwyer, showing the condition of parenchymatous nephritis. He also related the clinical history of this case.

March 21st, 1895.

The president, Dr. Peters, in the chair.

FRACTURE OF THE ULNA.

Dr. F. Winnett presented a patient who, while sparring, had fallen on the palm of his hand, fracturing the ulna at the junction of its upper and middle thirds and dislocating the radius head forward and upward. A right-angled splint was applied, and the dressing taken down at the end of twelve days. The dislocation had not improved. Under chloroform it was reduced, and the arm was put up in the straight position. It was now five weeks since the accident. The radius appeared to be dislocated forward at its head, as only partial flexion of the elbow could be made. There was also paralysis of the muscles supplied by the posterior interosseous nerve.

Dr. B. E. Mackenzie advised that these cases should be put up with the elbow flexed at an acute angle, the wrist being tied close to the neck. Authorities were generally agreed that this gave the best result. It had worked well where he had tried it. He was not in favor of any sort of splint that would restrict the circulation around the joint, such as plaster of Paris cases.

Dr. A. Primrose advocated the use of absorbent cotton splints after dislocations of the head of the radius, and firmly bandaged. The pressure would promote the absorption of the inflammatory material about the joint. The elbow could be perfectly flexed in this way.

AN ANALYSIS OF 6,777 CASES OF MIDWIFERY.

Dr. J. F. W. Ross gave an analysis of 6,777 cases of midwifery which his father had conducted. He referred to many interesting features connected with the cases. Although a busy practitioner, the late Dr. Ross kept a full account of all the important items connected with each case. The mortality of mothers was 39, the largest losses being from two epidemics of puerperal fever. The reader traced the disease in its course through each epidemic, and showed how careful his father was in regard to cleanliness and change of apparel in those pre-antiseptic days.* He had made two runs of 650 cases without a death. There were 15 deaths from placenta prævia. There were 19 cases of version. There were 5,409 head presentations, 148 breech, 58 foot, 5 breech and foot, 25 face, 7 brow, and 34 arm and shoulder. Forceps were used 491 times. Latterly he had used them oftener, with a lessened mortality rate and a less number of lacerations of the perinæum. He believed the forceps properly used were conservative to the perineal body. Chloroform was used in 458 cases. There were 48 cases of retained placenta, and 27 perineæ were torn.

Dr. A. H. Wright pointed out that in very many respects this was a phenomenal record. There were many lessons to be learned. One was that of cleanliness. Dr. Wright also spoke of the success that had attended Dr. Ross in his management of occipito-posterior positions of the head, and the ease with which he manipulated them into the anterior position. Another good lesson was the infrequent use of forceps. He believed in these latter days these were too often used. Another good example he set was in using chloroform so seldom.

Dr. H. Machell pointed out the excellent results as regards the mortality of mothers. That there were only 11 cases of eclampsia was also an astonishing part of the record.

Dr. Ross closed the discussion. He went carefully into his father's management of the cases in many points, showing how his good results had been attained.

It was moved that the society petition the Provincial Legislature to reject Bill No. 96, the Patrons' Medical Bill, which was aimed at hurting the profession. Carried.

TORONTO CLINICAL SOCIETY.

THE twenty second regular monthly meeting of the Toronto Clinical Society was held on Tuesday, March 12, 1895.

In the absence of the president, on motion Dr. Macfarlane took the chair.

The following Fellows were present : Walker, Cook, Anderson, Gregg, Powell, C. A. Temple, Macfarlane, Meyers, Brown, Bingham, Macdonald, Natrass, Ryerson, Fotheringham, Trow.

The secretary read the minutes of the previous meeting, which were adopted.

PERICARDITIS.

Dr. N. A. Powell then related the following history of a case : Woman, aged fifty, always healthy till a year ago, when she suffered from an attack of la grippe, from which he understood she made but an imperfect recovery. She was ill about a week before he saw her with symptoms of grippe, some of the features of which were headache, cough, and general malaise. She recovered partly from this, went down stairs, sat in a draft, and returned to bed with increased bronchial symptoms, and sub-sternal pain. This was her condition when his first visit was made. Fearing the super-vention of pneumonic or pleuritic trouble, he went over the chest pretty carefully. He did not think he would have missed a pericarditis if it had been present at that time, but it developed subsequently, while he was treating her. These cases were likely to be overlooked. It was related of a medical man who apologized to a celebrated consultant in London for having overlooked a case of pericarditis that the reply was : "Don't let that trouble you ; if you had discovered it, you might have treated it." However, the speaker did not think the condition in the present case was due to the treatment. The patient had a normal temperature and pulse of 85 or 90 for two or three visits, and was doing apparently very well. Suddenly she was attacked with a pain in the left side. Going carefully over the side, he heard a to-and-fro friction rub, limited to the costal cartilage of the fourth rib on the left side of the sternum. This was heard close to the ear, and was heard when breathing was suspended. The pain was intense, and the action of the heart was tumultuous and rapid, reaching 120 or 125. The temperature rose to 102°. He saw her twice a day after that till the time of her death. After two or three days the pain was measurably relieved, but the action of the heart increased in rapidity to 140 or 150, and the dyspnoea became very marked. The heart became very irregular. There was not at any time, as far as he could recognize, any pericardial effusion. The diagnostic point of such effusion in limited amount, as Roach and others have emphasized, is the occurrence of dullness in the fifth interspace on the right side of the sternum, the normal heart projecting to the extent of one-half inch to the right of the sternum in the space. There was no increase of dullness there whatever. Being a spare woman, this could be marked out with reasonable accuracy. The pulse, after reaching its maximum rapidity, came down to 120, even less. It was very irregular from

minute to minute and intermittent. The bronchial trouble increased, but the cough was not accompanied by any mucous expectoration. The cough was progressive. The patient died from prostration, with signs of heart failure.

The interesting features of the case were :

(1) The causation of the trouble. It was well known that traumatism and Bright's disease are factors in its causation, and that the purulent forms often accompany Bright's; but pre-eminently it was met with in connection with rheumatic attacks. There were none of these causes present in this case. A sample of urine gave negative results. The only toxic element he could think of in connection with the case was grippa poison, whatever that might be.

(2) The absence of effusion. There were cases of pericarditis undoubtedly with formation of fibrin upon the surfaces, and it was notable in these cases that the friction sound was heard where the heart was closely hugged by the pericardial sac, not in its lower part, where the motion was at its maximum. There were cases of dry pericarditis, just as there were cases of dry pleurisy. There were cases with fibrin thrown out, and cases with serous effusion, and with purulent degeneration or purulency of that fluid *ab initio*; and a fourth form, the tubercular. This case, of course, was limited to the first.

Why did the woman die? Was it the pericarditis that killed her, or something else? It was to be remembered that she was a weakly woman, and there was an associated bronchitis. The best explanation that has been given in such cases of the cause of death is given by Bland Sutton. The cases where he (the speaker) had opportunity to examine the bodies after death bore out the statement. Where pericarditis did cause death, it was not from the pericarditis, but from associated myocarditis, not made out during life by physical examination so much as by the presence of dyspnoea. In this case the breathing did not fall below fifty. It even exceeded that number, even after the temperature and the pulse were hardly above normal. The marked dyspnoea was due to the extension of the inflammation along the fibrous tissue extending from the pericardium itself into the structure of the heart. The inflammation extends along the fibrous structures of the left heart, and in this way the nutrition of the heart is interfered with. In every case where death has followed pericarditis, the left heart has been found to be soft and flabby. Heart failure followed as a direct result, not from an inflammation of the covering, but of the walls. He did not know that it was necessary to speak of the treatment. The antirheumatic treatment was often resorted to, as rheumatism was so often an associated condition. Statistics proved that the least perturbing treatment produced the best results. He had had one other case in which the

diagnosis was very difficult. It belonged to that class of cases with which there is associated a limited amount of pleurisy, in which there is present at the time, or subsequently developed, a dry pleuritic friction sound limited to about the area where the pericardial friction sound would be heard. He did not think any one, no matter how expert, could make a diagnosis from physical examination alone. A study of subsequent events was necessary to clear up the uncertainty that might be present.

Dr. C. A. Temple: I would like to ask Dr. Powell if there was any lessening in the quantity of urine.

Dr. Anderson: I would like to ask Dr. Powell about what time the dyspnoea appeared. The pericarditis might have been due to some toxic element in the blood, and that same toxic element might have affected the heart muscle, which would be the cause of the dyspnoea. But, from the acuteness of the symptoms, I would be rather of the opinion that the inflammation of the heart muscle was due to an extension of the pericardial inflammation.

Dr. Powell: In answer to Dr. Temple, I might say there was a notable diminution in the quantity of the urine, particularly in the latter days of life. Coincident with the development of the inflammation, there was increased rapidity in breathing and accompanying pain. But, after the pain was relieved and the temperature had fallen and the pulse rate decreased, the dyspnoea still continued. The rapidity of the breathing was noticeable even when the patient was resting quietly and sleeping.

Dr. Macfarlane asked Dr. Anderson what form of toxic agent he considered the affection of the heart might be due to.

Dr. Anderson said that it might be secondary to Bright's disease, or, as Dr. Powell had said, due to the poison of la grippe. The dyspnoea might be accounted for by the action of the poison on the respiratory organs.

Dr. C. A. Temple then read a paper on the history of a case of pericarditis.

The case was one of pericarditis, with effusion, following an infected sore throat—a doubtful case of angina. The quantity of effusion was large; marked dyspnoea, and loss of voice; the amount of urine scanty; the febrile symptoms severe. Treatment was blister and syr. ferri iod.

Dr. Greig: There are one or two points in Dr. Temple's paper that call for remark. I could not help noticing the high temperature present. I think it was unusually high— 104° . Under such circumstances one would expect to find pus. However, I suppose that can be ruled out, because, in children, if the nervous element is present, the temperature rises from slight causes. But in older persons, with a temperature of 104° , I would strongly suspect pus. I had a case of pericarditis with effusion two years ago, which was secondary to an attack of subacute rheumatism,

which was very well marked. The diagnosis of pericarditis was not difficult. There was a to-and-fro friction rub on the left side of the sternum. The effusion was excessive, causing dullness on the left side. If I had not heard the friction rub I would have suspected pleurisy. The case did well, and finally recovered.

The treatment I followed was the administration of the salicylate of soda, but I found that it inclined to depress the patient. The salicylates have a well-known tendency to deteriorate the blood; the patient was losing ground. As soon as I noticed this, I put the patient on iron, arsenic, and cod-liver oil and stimulants. As soon as the effects of these began to show themselves, recovery was rapid. During convalescence the girl was indiscreet, going out and getting her feet wet, a relapse following. She was sent to the hospital. I heard no more about the case.

Dr. Powell asked Dr. Greig a question: If, the friction rub having been heard in the early stage at the base of the heart, and the effusion subsequently becoming very large, he found it to be the case that the friction sound persisted throughout the existence of the effusion? Dr. Powell said that he had noticed in the last edition of Quain's dictionary the statement that, when once heard in this location, it did not disappear, no matter how much the effusion. He did not know of any other author who made the statement so positively. With regard to the iron used in these cases, it seemed to him that there were two forms especially useful. One was used largely by Loomis. He (Loomis) said it was nonsense—qualifying it with an expletive which he (the speaker) would not reproduce, but which was very emphatic—to give the syrup of the iodide of iron in any less quantity than a dram every three hours. Thus kept up, it produced rapid absorption. It should be given largely diluted. The other form was the ferri-salicylic acid mixture advised by Cohen, of Philadelphia. This combination was rather hard to make, but it was the only combination, according to Rice (one of the revisers of the Pharmacopœia), of these two drugs that could be given together.

Dr. Greig said that the friction rub did disappear during the effusion. It reappeared during the process of absorption. It was heard during the latter stages as distinctly as at first.

Dr. Fotheringham said that in the last case he had the double rub was heard until the patient had almost recovered. It was heard about half-way between the base and apex, at the left of the sternum.

Dr. Temple said that in his case he was a little troubled about the diagnosis at first, as the patient had slept with the one that had died from diphtheria four or five days previously. He was not sure whether the pericarditis was due to the diphtheria or the rheumatism. He gave salicylate of soda to relieve the pain, and, when this was relieved, administered the iodide of iron.

Dr. Macfarlane asked Dr. Temple if there were symptoms of rheumatic trouble.

Dr. Temple replied that the only symptom was pain in the knee-joint, but there was no pain or swelling, nor local heat.

Dr. Greig then detailed the history of a peculiar bladder case in a boy.

CASE FOR DIAGNOSIS.

He said : Mr. President and gentlemen, I have not a paper for you, but I think I can give you the points in the case as well without as with one. The case to me is rather interesting, and a little out of the usual line of such cases. About a month ago a lady brought to my office a boy, complaining that there was a large amount of deposit in his urine on standing for some time. He passed a sample for me, and it was very muddy in color and thick, very suggestive of pus. The reaction was intensely alkaline. The specific gravity was 1012. On filtering and making the reaction acid, I could not detect any albumin. Nor did it give the chemical reaction for pus, by the liquor potassa test. However, I could see pus cells under the microscope. There were no casts. The boy was aged twelve, not very robust, but appeared to be in good health. He went to school regularly, and was always ready for his meals. There was no constitutional diathesis, as far as I could make out. There was no tubercular history on either side. The peculiar feature of the case was that there was no frequency of micturition, nor increase in the quantity of urine passed. Nor was there any pain. He passed urine four or five times a day. Four years ago, when they were living in Winnipeg, he had symptoms of gravel. He was taken to a surgeon, who sounded him for stone. No stone was discovered. I might say that on examination of the urine under the microscope there was to be seen a profuse precipitation of triple phosphates, the most extensive display I ever saw. I sounded for stone three times, but I could not detect any. I have been treating him by washing out the bladder and administering internal remedies. Internally I have given boracic acid and salol, combined with tonics. The effect from this was not very satisfactory. I changed to the benzoates, giving first the benzoate of soda and afterward the benzoate of ammonia, combined with buchu. The effect not being satisfactory, I have been giving a preparation containing benzoic acid, buchu, uva ursae, and several other drugs. The drugs I have used for washing out the bladder were, first, boracic acid, acid 10 grains to the ounce. The effects of that appeared to be *nil*. It produced no pain. I found that a very large quantity could be injected with no discomfort, as much as twenty ounces, and the bladder was not full then. It appeared to be a very large amount to pass into the bladder, especially in a boy aged twelve. I next tried bichloride, 1-10,000 ; the result was beneficial in one way. The next

visit the urine was perfectly clear, and the reaction was not so intensely alkaline, but it caused him much pain. He could not sleep that night. I reduced the strength until he could bear it. But when it was diluted this much it seemed to lose its effect. I am now using permanganate of potash, 1 gr. to 1 oz. But this again produced a great deal of pain. I next used $\frac{1}{2}$ a gr. to the oz., but this also produced pain. Last night I used $\frac{1}{4}$ gr. to the oz., and while the pain was not so great as before, yet it was considerable. The 1 gr. and the $\frac{1}{2}$ gr. solutions caused a spasmodic action of the bladder. Its force was so great as to raise the fluid almost to the top of the funnel, when nearly empty. A spasmodic contraction of the rectum also took place. This was so violent that I was obliged to cease the washing while the boy went to the closet. The case is interesting in a good many ways. You would expect to find stone; and yet stone in children is easily diagnosed. You generally strike the stone immediately on introducing the sound. In this case I have manipulated most carefully, and can get no indication of stone. Nothing can be felt per rectum. The liver is normal. A fairly sized catheter can be passed without difficulty. If the permanganate is not successful in curing the case, I am going to try silver nitrate. However, it is so powerful that I am a little afraid to use it.

Dr. Macfarlane to Dr. Greig: What did they consult you about first?

Dr. Greig: The deposit in the urine. The boy was suffering no pain, there was no irritation, no frequency of micturition, simply a deposit of phosphates and pus.

Dr. Powell: I would like to ask a question and get Dr. O'Reilly to answer it. I know he has had a good deal of experience. Has any one any knowledge of the use of creolin as an irrigating fluid for the bladder? I have had some experience with it that makes me think it better than other remedies we have been using for this purpose. For example, in two recent cases of empyema I have used it after using saturated solutions of boracic acid. The pus discharged was extremely offensive and continued so, notwithstanding the use of boracic acid. The first injection of creolin, $\frac{1}{100}$, wiped away the odor completely, and it did not return. The case went on to recovery sooner than any I had seen before. Eight ounces of creolin have been swallowed by mistake and recovery followed. I suppose we have all used it in intra-uterine irrigation. Professor Shuttleworth has made experiments with regard to its efficiency as a germicide and antiseptic. He finds it one and a half times stronger than carbolic acid in similar strengths, quoting from memory. If its efficacy be greater than that of carbolic acid, and it be non-poisonous, it should be a proper fluid for irrigating the bladder. I have used for bladder irrigation silver nitrate solution. I am not surprised at $\frac{1}{100}$ permanganate

solution causing pain. My experience is that $\frac{1}{1000}$ or $\frac{1}{2000}$ is sufficient, and then increased gradually.

Dr. O'Reilly, being called on, said that he did not hear the paper, but was interested in the subject, as very many cases came under observation at the hospital.

Dr. Macdonald said the case was one in which a person would naturally look for stone as the cause of the trouble. The urine was apparently the urine of irritation, but it appeared on careful sounding that no stone was present. Even that did not exclude the possibility of stone being present. It might be there and be sacculated. It might be lodged in a pouch that was partly pervious, and yet miss the sound. There was one point that he had heard Dr. Greig refer to, and that was, there was an amount of residual urine. It had likely disappeared since the washing had been carried out. If there was a want of tone in the bladder, and residual urine was present, the case would resemble one of advanced prostatic disease. The question, however, was practically one of treatment, and Dr. Greig had certainly treated the case in a way that he (the speaker) would approve, by washing out the bladder with antiseptics. He had not yet tried turpentine. As this had the effect of changing the color to that of violets, he thought it worth trying. He did not know the manner Dr. Greig had followed, but some were in the habit of injecting small injections slowly. His plan was to allow large amounts to flow in freely. He used the ordinary fountain syringe with a Y in the main tube leading to two branches, the one being clamped while the bladder was filling, then released, and the other one clamped while the bladder was emptying. (Dr. Macdonald here produced the apparatus for inspection.) At the end was an ordinary soft catheter. For women he used a glass catheter, and found it very satisfactory. He commonly used a much weaker solution of the permanganate and the bichloride than Dr. Greig had used. The bichloride was apt to produce considerable pain. A large injection would wash out the folds better than a small one. As to frequency, he would wash out two or three times a day at least. If this treatment did not effect a cure, the next thing would be cystotomy and drainage. It was easy to cut a hole in the bladder and drain, but such cases were not invariably successful, so he considered it wise to persevere with the washing out and the general systemic treatment for a considerable time before resorting to operation.

Dr. McFarlane said that he had listened with a great deal of interest to the report of the case. From what had been said he could not see that the symptoms were those of cystitis, as there were no subjective symptoms, there was no frequency of micturition, no increase in the quantity of urine, and no constitutional effects of the dis-

ease. With him, cystitis acted entirely differently, whether from stone, tubercle, or from whatever cause. Frequency of micturition was invariable. There was also a certain amount of restlessness on the part of the patient, especially at night, and then there were constitutional disturbances. The washing out with strong escharotics would do more harm than good, whether permanganate, bichloride, or silver nitrate. He did not think it wise to throw them into the bladder where there were no other symptoms than the presence of pus.

Dr. O'Reilly asked if Dr. Greig had used Stone's mixture, containing benzoic acid and carbonate of potash, internally.

Dr. Greig said that he had used benzoic acid and buchu. He had found a number of drugs that would purify the urine, but when he ceased using them the urine would again become foul.

Dr. Cook suggested that there might be some trouble in the pelvis or the kidney. He asked if there were any symptoms referable to the kidneys. He spoke of administering the urine by inhalation. This was useful in the case of children. One-half to two ounces might be used in this way during twenty-four hours.

Dr. Fotheringham asked if any of the Fellows had tried oxalic acid in small doses for these bladder cases. He had seen it act promptly in one or two cases. He had seen no rational explanation of its use.

Dr. Macfarlane asked if there was phimosis present.

Dr. Greig replied that there was some adherence of the prepuce, but not enough to account for symptoms. He stated that he had related the case at the Toronto Medical Society, and the impression of the members was that it was a case of stone, but the authorities stated that stone in children was easily recognized. There was one peculiar point, and that was on the sound entering the bladder it always had a tendency to fall to the left side. He was not able to bring it to the right side at all. He did not know if that indicated any malformation of the bladder, but it suggested it.

He had not tried oxalic acid. He had thought of trying creolin, but as he had never heard of its being used he did not like to initiate the treatment. In regard to Dr. Macdonald's plan, he thought there was danger of too much force being brought to bear on the walls of the bladder.

Dr. Macdonald said that by raising or lowering the bag any degree of force could be obtained.

Dr. Greig, continuing, said that he followed Skene's method of washing out the bladder. He stated that in this case he could not use a large catheter, so that irrigation was necessarily slow. He pointed out that the amount of residual urine amounted to about two ounces, which he withdrew with the catheter. He had asked the patient to pass his water while

on the hands and knees, so that the bladder would be more completely emptied. As the urine was alkaline he thought there was no kidney trouble, unless the cystitis accompanied the pyelitis.

Dr. Trow then read the report of a case of a foreign body in the œsophagus.

Dr. Powell related the history of a case in which a fish-hook had been swallowed. A boy, upon his return home from a fishing expedition, found his grandmother asleep with her mouth open. The temptation being great, he dropped his baited hook into the old lady's mouth. Awaking with a start and a swallow down went the hook, with the string attached. A young physician who had just settled in the place was hastily summoned. He asked the boy for another of his hooks, took a bullet from his pocket, made a hole through it so that it would fit over the hook, then he threaded it on the line, and with a catheter pushed it down, so that it slid over the hook in the stomach, which was then withdrawn without injury to the walls of the stomach or œsophagus.

Dr. Bingham presented a double-headed monster which he had recently taken from a woman.

The meeting then adjourned.

Book Reviews.

A BOOK OF DETACHABLE DIET LISTS, for Albuminuria, Anæmia and Debility, Constipation, Diabetes, Diarrhœa, Dyspepsia, Fevers, Gout or Uric Acid Diathesis, Obesity, Tuberculosis, and a Sick-Room Dietary. Compiled by Jerome B. Thomas, A.B., M.D., visiting physician to the Home for Friendless Women and Children and to the Newsboys' Home ; assistant visiting physician to the King's County Hospital ; assistant bacteriologist Brooklyn Health Department. Price, \$1.50. Philadelphia : W. B. Saunders, 925 Walnut street.

Between the covers of this book are printed the diet lists for many diseases. These can be torn out and further enlarged to suit the practitioner's requirements and left with the nurse in charge. As complete directions for making soups, egg-nog, and many delicacies are printed, there can be no excuse for not following out instructions. We can recommend them to the profession.

ENLARGEMENT OF THE PROSTATE : ITS TREATMENT AND RADICAL CURE. By C. W. Mansell-Moulein, M.A., M.D. Oxon., F.R.C.S., etc. Demy 8vo. 176 pages. Price, \$1.50. London : H. K. Lewis, 136 Gower street, W.C.

The above volume is filled with information, presented in a most instructive and readable manner. The first chapter deals with the Normal Prostate, its size, development, relations, and functions. It points out clearly a mistaken idea in reference to the homology between prostate and uterus. "The uterus, therefore, is homologous with part of the prostatic *utricle*, and in no way with the prostatic gland." The homology, therefore, that is daily made between uterine fibroids and prostatic enlargement is based on error.

The succeeding four chapters consider the prostate undergoing pathological change, and the causes and effects thereof.

The sixth chapter is very complete, and deals with the most important subject, Diagnosis. Too much care cannot be devoted to the subject of diagnosis. Every male of fifty years of age is not suffering from enlarged prostate, and urinary disorders can arise in them from other causes. The operative treatment is ably discussed, while local treatment by the catheter to maintain the urethral capacity, prevention of cystitis and retention, etc., etc., are all referred to.

Chapter eleven, where the subject of Castration for the cure of Enlarged Prostate is dealt with, is up to date. We are surprised, though, to notice that due credit is not given to Dr. J. William White for priority in this field, more especially since the author lays claim to the idea, as follows : "As frequently happens in such cases, the same idea appears to have occurred, more or less defi-

nitely, to many people almost at the same time. In November, 1892, shortly after the publication of my Hunterian lectures, I discovered the advisability of the operation with a patient who, though he admitted the force of the arguments in favor of it, not unnaturally declined it on the ground that it must be in the nature of an experiment." This is altogether too flimsy an argument on which to base any claim to priority of idea. The credit is clearly due to Dr. White, and has been pretty well acknowledged by the author's own countrymen.

The last chapter, on Conclusion, is very trite, and concisely sums up the question. We can thoroughly recommend the work to the profession as being the best work on "Enlargement of the Prostate" printed in English to-day. The illustrations, typography, paper, and binding are, as usual with Mr. Lewis' publications, first class.

Books and pamphlets received :

THE PHYSIOLOGY OF THE CARBOHYDRATES. Their application as Food and relation to Diabetes. By F. W. Pavy, M.D., LL.D., F.R.S., F.R.C.P., etc. 280 pages. Illustrated, \$2.50. London : J. A. Churchill.

THE YEAR BOOK OF TREATMENT FOR 1895. A Comprehensive and Critical Review for Practitioners of Medicine and Surgery. In one 12mo. volume of 501 pages. Cloth, \$1.50. Philadelphia : Lea Brothers & Co., 1895.

INTERNATIONAL MEDICAL ANNUAL FOR 1895. A concise, well arranged, practical and helpful volume, giving the advance of medical science in all parts of the world. 648 pages. Illustrated. Price, \$2.75. New York : E. B. Treat.

A NEW METHOD OF EXAMINATION AND TREATMENT OF DISEASES OF THE RECTUM AND SIGMOID FLEXURE. By Howard A. Kelly, M.D., of Baltimore, Professor of Gynæcology and Obstetrics in the Johns Hopkins University.

THE TREATMENT OF WOUNDS, ULCERS, AND ABSCESES. By W. Watson Cheyne, M.B., F.R.S., F.R.C.S., Professor of Surgery in King's College, London. In one 12mo. volume of 207 pages. Cloth, \$1.25. Philadelphia : Lea Bros. & Co., 1895.

SAUNDERS' NEW AID SERIES. A manual of the modern theory and technique of surgical asepsis. By Carl Beck, M.D., New York. 65 illustrations and 12 full-page plates ; 306 pages. Price, \$1.25. Philadelphia : W. B. Saunders, 925 Walnut street.

MEDICAL NURSERY. Notes on lectures given to the Probationers at the London Hospital. By James Anderson, M.D., F.R.C.P., etc., etc. Edited by Ethel F. Lamport, with an introductory Biographical notice by Sir Andrew Clark, Bart. 184 pages. London : H. K. Lewis, 136 Gower Street, W.C.

A SYSTEM OF SURGERY.—Messrs. Lea Brothers & Co., of Philadelphia, announce the publication of a new System of Surgery by American authors, edited by Frederic S. Dennis, M.D., of Bellevue Hospital Medical College, New York. It will be completed in four imperial octavo volumes, containing about 900 pages each, and illustrated with figures in colors and in black. It is expected that the first volume will be ready some time this month, and that the succeeding volumes will follow at short intervals

Medical Items.

THE wife of Dr. F. C. Heath died suddenly in Brantford on Sunday, March 31st.

PROF. OSLER, of Johns Hopkins Hospital, Baltimore, spent a couple of days in Toronto at Easter time.

DR. GEORGE STERLING RYERSON, M.P.P., of Toronto, has been promoted to the rank of Deputy Surgeon-General.

DR. L. F. BARKER (Tor., '90), who has been at Johns Hopkins for the last four years, sailed March 20th for the continent, where he will remain about six months.

AT a meeting of the Canadian Wheelmen's Association held in Toronto, April 12th, Dr. P. E. Doolittle, of Toronto, was elected president, and Dr. J. D. Balfour, of London, vice-president.

ROOSEVELT HOSPITAL, New York, is to be enlarged by the addition of a five-story building to the west wing ; the estimated cost is \$125,000.

IT is proposed to erect a ten-story building in Chicago, to be called "The Medical," the offices of which will be rented exclusively to doctors. The rooms and conveniences will be arranged to suit the views of both doctors and patients.

THE next International Congress of Gynæcology and Obstetrics meets at Geneva in September, 1895. It will discuss the subjects of Eclampsia, Displacements of the Uterus, Pelvic Contractions, Pelvic Suppurations, and Abdominal Sutures.

A STATUE FOR DR. GROSS.—A joint resolution, permitting a bronze statue to be erected on public grounds in Washington in honor of Dr. Samuel D. Gross, and appropriating \$1,500 for preparation of the site, was reported from the Library Committee in the Senate, and passed.

ANOTHER CONSUMPTIVES' HOME.—Mr. J. H. Schiff and Mr. L. G. Bloomingdale have each given \$25,000 for the establishment of a country home for consumptives. The new establishment will be called the Montefiore Country Home for Consumptives. It will be non-sectarian, and entirely devoted to the poor.—*Medical Record*.

ANOTHER HOME FOR CONSUMPTIVES.—General J. Watts De Peyster, of Red Hook, has had plans drawn for a Consumptives' Home at Verbank, N.Y., which will cost \$30,000, and accommodate three hundred patients. It

will be the second institution of its character in New York State. The construction of the building will be begun as soon as the necessary details can be carried out.—*Medical Record*.

AS OTHERS SEE US.—“The other day I heard an apophthegm,” writes Mr. James Payn, “which left me with a very exalted idea of the gentleman who uttered it. We were talking of the medical profession, and he observed of it: ‘There is a great difference between a good doctor and a bad one, but very little between a good doctor and none at all.’ The cynicism of the remark was deplorable, but its intelligence was indisputable.”

THE Philadelphia Board of Charities and Correction has appointed Dr. Hobart A. Hare a member of the staff of physicians at the Philadelphia Hospital, in place of Dr. Judson Daland, who has been dropped. The reason given for this action on the part of the board is that Dr. Daland is alleged to have allowed certain patients suffering from malaria to go untreated for a certain length of time, in order that he might study the development of the peculiar organism which produces malaria. To a board capable of such action for such reasons it probably makes very little difference what criticisms may be made upon its action, but we think it likely that the medical profession and the medical press will not rest content without knowing more and saying something about such a policy.—*Boston Medical and Surgical Journal*.

A SHOT AT A WILD DUCK.—Was ever shot at a wild duck so fateful to men and empires as this? A father and his son were hunting wild fowl on a northern marsh. The young man shot at a duck, dropped it, and hurried to gather it. Reaching the spot where it had fallen, he found himself in an oozy treacherous slime, into which he began rapidly to sink. In response to his son's cries of alarm, the father hastened to the rescue, and, being a man of prodigious strength, succeeded in extricating him, but not before he himself had become thoroughly wet through. The two duck hunters hastened home. That home was the palace of Spala. The father was Alexander III., Czar of Russia, the son was the Grand Duke George. From the chill that resulted from the exposure undergone in saving his son from the duck bog was developed that malady which ended in the death of the Czar. Thus the fortunes of a dynasty were changed by a chance shot at a wild duck on the marsh. Was ever such a shot at a duck before or since?—*Forest and Stream*.

THE NEW YORK CITY BOARD OF HEALTH AND SPURIOUS ANTITOXIN.—The Board of Health has adopted the following resolution:

“That no preparation of diphtheria antitoxin shall be offered or exposed for sale in this city unless the receptacle containing such preparation has a label on which is placed a statement of the value of the contents in antitoxin, as measured by some generally recognized standard, and the name and address of the producer.”

No one doubts that this resolution is in the interests of public health. But it is a curious fact that such a resolution is allowed to pass unnoticed by the advocates of personal liberty. The newspapers advertise, and drug stores

display, any number of spurious cures for cancer, consumption, epilepsy, etc., and no one protests. But the sale of a spurious cure for diphtheria is forbidden.—*N. Y. Medical Record*.

THE ART OF NURSING.—The second annual meeting of the American Society of Superintendents of Training Schools met in Boston, Mass., at "The Thorndike," on Wednesday and Thursday, February 13th and 14th, the following Canadian Training Schools being represented: Miss Snively, superintendent Training School, Toronto General Hospital; Miss Draper, Royal Victoria Hospital, Montreal; Miss Moore, Lady Stanley Institute, Ottawa; Miss Brent, Homœopathic Hospital, Toronto; and Miss Underhill, Children's Hospital, Toronto. During the convention many valuable papers were read by the members present, and most interesting and lively discussions followed. The organization, although young, is certainly vigorous, and gives promise of much good work in advancing the interests of the nursing profession. Miss Snively read a paper on "A Uniform Curriculum for Training Schools," and was granted a committee to aid her in drafting a suitable curriculum, to be presented at the next annual convention, in order that in the near future some definite steps could be taken in this important direction. The social element was a pleasant feature of the gathering, the members of the convention being entertained at several lunches and receptions, one of the most pleasant of the latter being that given by the superintendent and trustees of the Boston City Hospital. The administration building and library of the hospital were thrown open, the rooms brilliantly lighted and decorated, and a large number of the prominent medical men and distinguished citizens were present. The next annual meeting will be held in Philadelphia. The following officers were elected for the ensuing year: Miss Davis, University Hospital, Philadelphia, president; Miss Snively, Toronto General Hospital, vice-president; Miss Drown, City Hospital, Boston, treasurer; Miss Littlefield, Episcopal Hospital, Philadelphia, secretary; Miss Darche, Charity Hospital, New York, and Miss Richards, Episcopal Hospital, Brooklyn, councillors.—*The Mail and Empire*.

DEATH RATE AMONG MEDICAL MEN.—The death rate which prevails among medical men has often been the subject of inquiry. The curiosity felt by the public on the point has been probably not unmingled with the ironical spirit with which the world learnt that a late Lord Chancellor had drawn his own will amiss. But even a cursory examination of the statistics hitherto presented convinces us that no very valuable conclusions can yet be drawn in so complicated a matter. The usual fallacy of casual deductions from statistical data presents itself at once. General practitioners are no doubt exposed to peculiar dangers of infection and contagion, which probably shorten their average life. But to impute to the profession itself—apart from such special dangers—any considerable importance in determining the duration of life is impossible in present circumstances. We know little or nothing of the averages of deaths from various causes which prevail amongst those who follow other professions. Bertillon's comparison of the mean duration of life in the medical

profession and among quarrymen bristles with fallacious implications. How can we compare an occupation which needs great physical vigor with a professional life? A quarryman must abandon his work if he is enfeebled, and will drift into other employments. Nevertheless, these paragraphs which we lately met with do possess a general interest. Dr. Salzmann, of Essling, in Würtemberg, has been investigating the mean duration of life, in German medical men during the last four centuries. The sixteenth century showed average death at the age of thirty-six years; in the next hundred years life was usually prolonged to forty-five; forty-nine was usually reached in the eighteenth; and in our own times fifty-six years. The marked improvement he attributes to the decreasing virulence of plague, smallpox, and typhus. An abnormally high death rate from tuberculosis is reported to exist among medical men in Russia—15 per cent. of the whole number of deaths being assignable to that cause. Zelande has lately presented some most valuable statistics, calculated for three years, upon a consideration of the whole profession, some 15,000 odd. Nearly 33 per cent. of deaths were due to virulent diseases—pyæmia, typhus, cholera, diphtheria, etc. The prevalence of suicide, over 8 per cent., too, is strange. The *Medical Press* suggests poverty as a possible cause for this self-destruction; and in harmony with such an inference is the French experience that a large majority of suicides is due to want or fear of want. Perhaps the most satisfactory feature in the statistics we have seen is the statement of Bertillon, that though medical men do not apparently enjoy longer life than many others, their children display a singular immunity from disease.—*The Medical Magazine*, London.

PARASITISM, SYMBIOSIS, AND COMMENSALISM—When one organism lives in or upon another, and feeds at that other's expense, as an unbidden guest, without benefiting its host in any way, we call the condition parasitism. But there are many cases where the two beings form a physiological partnership, and these are generally included under the name symbiosis. The members of the firm may be both animals, or both plants, or one may be an animal and the other a plant. In some the association is so close that it is exceedingly difficult to determine that they are indeed two beings and not one. For many years, for example, in some radiolarians little yellow bodies had been noticed. They were seen to possess a well-defined nucleus and a cell-wall, and they were looked upon at one time as spores, at another as secretory cells; but later it was found that, though the radiolarian might die, yet the yellow bodies would survive and multiply. They were, in fact, minute algæ, and, though they lived in the radiolarian, the host and the guests both prospered; for the host gave off carbonic acid and nitrogenous products, which formed the best food for his guests, the algæ; and these in their turn evolved oxygen, and so supplied one of the chief wants of the radiolarian. Each profited by the association. In other cases the union is much less intimate, and these have been differentiated by name under the term Commensalism. There is a hermit crab who carries about with him attached to his shell, or even to his claw, a sea-anemone. When the crab feeds the anemone shares the feast, and, moreover, enjoys the

benefits of free locomotion, though little able to move itself. In its turn it serves to protect the crab by hiding him, and may also aid in killing or numbing his prey; and when the time comes that the crab must seek a new shell, he carefully assists his partner to change his home, also showing how greatly he appreciates the union. To other examples of this sort of partnership we have referred elsewhere in an account of the additions which have been made to the museum of the Royal College of Surgeons of England during the past year. An acacia tree finds itself in danger of destruction by ants and other insects, and enlists in its service a tribe of ants, who are not only innocuous, but ready to fight for the plant and keep off its foes. But the ants are true mercenaries, and will not serve without pay, and for them the tree provides food and shelter—hollow appendages (stipules) to live in, and nutrient fluids on which they may feed. Then, when the foes appear, they rush out and drive them off. The allied phenomena of parasitism, symbiosis, and commensalism illustrate in a marked manner the interdependence of organisms, and bring home to us in a picturesque manner the fact that few are able to live only for and by themselves, but that it is the common lot by serving others to serve ourselves.—*The Lancet*.

OBITUARY.

DANIEL HACK TUKE, M.D., LL.D., F.R.C.P.—Dr. Hack Tuke, the great alienist of England—probably the greatest in the world—died March 6th, at the age of sixty-eight.

E. D. WORTHINGTON, M.A., M.D.—We learn from the *Montreal Medical Journal* of March that Dr. E. D. Worthington, one of the oldest and most highly respected practitioners in the Province of Quebec, is dead. He was seventy-five years of age. He practised about 50 years in Sherbrooke.

KENNETH HUGH L. CAMERON, M.D.—We have to announce with deep regret the death of Dr. K. H. L. Cameron, M.D., at his late residence, Cayuga, on the morning of April 8th, in the forty-first year of his age. He was a student of the Toronto School for four years, and received the degree of M.B. from the University of Toronto in 1875; also M.D. in 1876. After graduating he commenced practice in Cayuga, where he remained until the time of his death. He was successful and highly respected both as a physician and a citizen.

SIR WILLIAM SCOVELL SAVORY, BART.—Mr. Savory, the distinguished surgeon of St. Bartholomew's Hospital, London, died after a short illness from influenza, March 4th, at the age of 69. He was very conservative, and, at the same time, brilliant in many respects; and, although he did not write much, was generally regarded in Great Britain and on the continent as one of the greatest surgeons of the age. *The British Medical Journal*, in an obituary notice, refers to a very pathetic incident in his life. In 1867 his finger was poisoned, and the septic process was transmitted to his wife, who dressed the injured hand. Mr. Savory recovered after a prolonged illness, but Mrs. Savory died.

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EDITOR:

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ASSOCIATE EDITORS:

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Original Communications.

PRIMARY CARCINOMA OF THE GALL BLADDER.

By J. E. GRAHAM, M.R.C.P. LOND.,

Professor of Medicine and Clinical Medicine, University of Toronto; Physician to the Toronto General Hospital, and to St. Michael's Hospital,
TORONTO.

PRIMARY carcinoma of the liver occurs in one-eighth of all cases. Primary carcinoma of the gall bladder and biliary passages is not so infrequent as one might suppose. Musser, in an exhaustive paper read at the meeting of the American Association of Physicians in 1889, made a collection of 159 cases, and Norman Moore, in a recent Bradshaw lecture on the distribution and duration of visceral growths, gave the results of 129 cases of new growths in the internal organs of the body. There were, for instance, twenty-nine cases of cancer of the stomach, fifteen of the cesophagus, and ten cases in which the gall bladder and biliary passages were the seats of disease. This will give some idea of the frequency of primary malignant disease in this portion of the body.

The following case is of some interest, as the clinical history pointed to the nature of the disease, so that an approximate diagnosis was made during the life of the patient, and the development of the disease could be studied more readily than in most cases.

J. J., aged 45, shoemaker. Admitted to the Toronto General Hospital January 28, 1895. Date of examination, January 30. History taken by Mr. J. Sheehan and Mr. H. K. Merritt.

Patient was a native of Wales, and came to this country seven years ago. He suffered for years from bilious attacks, brought on by indulgence in certain kinds of food, especially pork. These attacks usually occurred about once a month, but sometimes an interval of six months would intervene.

The chief symptoms were nausea and vomiting of a deeply-stained material. The attacks were often so severe that it took three or four days to recover from them. They were not accompanied by pain. Three years ago he had an attack of what was diagnosed at that time as congestion of the liver, which lasted seven weeks.

The present illness began in August last, five and a half months ago.

Patient is a widower, his wife died eight years ago. He has one son, eighteen years of age, quite healthy.

Father, a healthy man, died at seventy years of age of pneumonia. Mother living, eighty-four years of age. He has three brothers and three sisters, all healthy. There is no history of cancer in his family.

Patient has been a hearty eater, taking four meals a day. He has indulged very moderately in intoxicants, taking one or two glasses of beer in a week. In this country he has scarcely taken any. He smoked for a number of years when he was a young man, but of late has chewed tobacco instead.

The patient's occupation, that of shoemaker, tended towards torpidity of the digestive organs, not only on account of the lack of exercise, but from direct pressure on the abdomen when stooping forward at work. The attack from which he suffered three years ago, diagnosed as congestion of the liver, was probably one of biliary colic, accompanied by cholangitis, and more or less perihepatitis. After about a week of dull, indefinite pain over the hepatic region, he was suddenly seized with a violent spasm, so severe that he fell on the floor. The pain remained locally all over the liver, and shooting down the back. Then came vomiting, followed by excessive perspiration. Shortly afterwards jaundice set in. He remained in bed seven weeks, when from the description he seems to have suffered more or less inflammatory action in and around the liver.

The present attack began in the middle of last August, when he noticed a slight pain and tenderness over the region of the liver, with nausea

and a desire to vomit. Thinking, from previous experience, that an emetic might be of service, he took one, and vomited freely. Instead of relief, however, he felt weaker and generally worse afterwards.

His appetite became poor, and he was much troubled with flatus.

He first took some patent medicine, and in the beginning of October went to the dispensary and called in a physician. His appetite became gradually worse, his weakness and emaciation increased. The passages from the bowels were yellow at first, but gradually lost the normal color, so that in seven weeks from the commencement they were quite clay-colored, and have since remained so.

An intense itching around the anus was experienced early in the disease, and has continued ever since. It is very much aggravated by movement of the bowels. There is no cutaneous irritation in any other part of the body.

His urine became high-colored at the beginning of his illness, but micturition did not trouble him until three weeks ago, when the urine became scanty and contained a heavy brownish sediment. It was then difficult to pass. This condition was partly removed by treatment, but has since returned.

During the last six or eight weeks he has noticed the gradual enlargement of the liver, but cannot say exactly when he noticed it first. He has also noticed the development of nodules on the surface. Slight jaundice occurred early in the illness, but has gradually faded away, until now only a slight tinge is seen in the conjunctiva and skin. His height is 5 feet 4½ inches. Ordinary weight, 140 lbs. ; present weight, 90 lbs.

Patient had a pained, wearied expression of countenance, but was always bright when spoken to.

Lips a good color. Tongue red, with a little white fur. Patient complains of dryness of the mouth at night. Appetite is at present fairly good.

He does not suffer from pain in the stomach except after eating, when he has also eructations of gas, with a sense of weight and distension. He does not vomit. Bowels constipated. The discharges are very gray and sticky, and, on examination, are found to contain a small amount of fat, as well as indol and bacteria. Bile pigment was not at any time present.

The fat was not found in excessive quantities, as is often the case in obstructive jaundice.

Inspection. Abdomen distended ; lower part round, tense, and more or less bulging. Over both lobes of the liver prominence can be distinctly seen. The right and left hypochondriac regions are especially prominent. The pain and tenderness over the left side is so great that the breathing is made superficial.

Palpation. Nodules can be felt at various points over the liver. One very large one in the left hypochondrium below the margin of the ribs, internal to the nipple line, and another small one in the median line, midway between the ensiform cartilage and the umbilicus.

A very distinct, hard, and prominent nodule can be felt like a knuckle pressing under the skin, situated a little below the lower margin of the liver in about the upper border of the right iliac. This was noticed early in the disease before any of the others, and we were somewhat in doubt as to whether it arose from the liver, or was simply attached to it. This tumor, as will afterwards be seen, sprung from the gall bladder.

Liver considerably enlarged. The lower border begins on the left side at the top of the tenth rib, passes across the median line an inch above the umbilicus, and then obliquely downwards below the margin of the ribs, where it cannot be further distinguished on account of the tension of the walls of the abdomen. The spleen could not be felt. A marked friction fremitus was noticed over different portions of the liver, when deep respirations were made.

Percussion. The upper limit of liver dullness commences at the sternum, at the lower border of the fourth rib, follows it to the nipple line, then to sixth rib in mid-axillary and seventh in posterior axillary line, then horizontally across to the spine, touching the ninth rib. Lower border on left side is the same as found on palpation up to the median line, then it takes an oblique course downwards and backwards, passing about an inch above the crest of the ilium.

Auscultation. A distinct rough, grating friction sound could be heard over some of the nodules on deep inspiration. "Rectal examination revealed a tender point, quite small and cord-like, placed obliquely high up near the brim of the pelvis on the right side."

Circulatory system. Heart's sounds weak in all the areas ; first sound at apex especially weak.

Pulse full, not easily compressible. Some arterio-sclerosis.

Nothing abnormal in the respiratory system.

Nervous system. Pain extreme over the liver at a spot where a nodule is rapidly growing. Pruritus ani exists, and is quite severe.

Urinary system. A heavy deposit of pink urates occupies two-fifths of the volume of urine when it remained some time in a precipitating glass. Above the sediment, the urine is of a heavy opaque yellow color. Odor very disagreeable ; specific gravity, 1028 ; reaction, acid ; color, after heating and disappearance of sediment, is dark yellow.

Chlorides, sulphates, and phosphates normal.

Albumin, sugar, and bile absent.

Amorphous urates found on microscopical examination.

Blood examination : Corpuscles, 4,140,000. Hæmoglobin, not estimated.

The course of the disease can be briefly given. The patient, when he came in, was suffering from severe pain and more or less fever, as the result of the growth of a nodule, which could be plainly felt as a protrusion about the size of a small orange, to the left of the median line. Friction sounds could be distinctly felt in the same situation.

In about a week's time, the pain and tenderness to a great extent disappeared, and the patient's condition improved. He remained in this state for two or three weeks, when he again complained of pain along the lower margin of the liver, a little to the right of the median line, and in a few days another nodule developed, accompanied by the local and general symptoms as in the one already described. After this the patient became rapidly weaker and more emaciated.

A singular condition was noted on several occasions. Biliverdin was not found either in the fæces or urine, while, at the same time, the skin was but very slightly, if at all, jaundiced. The surface of the body presented rather the yellow tint of pernicious anæmia. From this we concluded that the bile-forming function was to a great extent suppressed, owing to the presence of the cancer. About three or four weeks before his death, we noticed the commencement of ascites. The fluid gradually and slowly increased, but did not exist in very large quantity, even at the time of his death. On palpation the feeling of fluctuation was found to extend over a limited portion of the abdomen, the part occupied by the enlarged liver.

Bile pigment was not found in the urine at any time during the illness. Towards the end the discoloration of the skin became more marked.

During the week before death he remained the greater part of the time in a sort of stupor, complaining of intense pain rather than weakness.

Owing to the great enlargement of the left lobe of the liver and the great abdominal tension, the diaphragm was pushed upwards, interfering with the breathing action, and producing much distress on this account.

Patient was first given salol as a hepatic stimulant and disinfective. Salicylate of soda was afterwards given. Then, thinking of the possibility of a sclero-gummatous condition being present, patient was put on a course of potas. iodid. The drug did not cause any lessening of the nodules, but patient expressed himself as feeling better after the administration of the medicine. He took the iodide about three weeks.

The liver increased in size rapidly during patient's stay in the hospital. This was shown rather by the pushing up of the diaphragm and by the increased tension of the abdominal walls than by the lowering of the lower margin of the organ. During the last few weeks a distinct depression of

umbilication could be distinguished on the situation of one of the large elevations.

POST-MORTEM EXAMINATION.

Body much emaciated. Dark discoloration of skin. On opening the abdomen, which was much distended, a considerable quantity of ascitic fluid, not very deeply stained, was found.

The liver weighed fourteen pounds. It filled the whole of the upper part of the abdominal cavity, and presented a rough, uneven surface, owing to the presence of large nodules. The cut surface presented large cancerous masses, with a liver substance separating them in places, while in other portions the cancerous masses were separated by fibrous structure. The nodule which during life was felt below the liver in the upper part of the right iliac region, and which was first noticed by patient, the post-mortem revealed to be a cancerous mass, which had originated in the gall bladder. The greater portion of the latter was destroyed, leaving only a small cavity near the cystic duct, which was occupied by two large calculi, each about the size of a small hazel nut. The portion of the cancer which sprung from the walls of the gall bladder seemed to be of a villous character. The common bile duct was permeable, but the calibre was much diminished. Some recent fibrous adhesion existed between the surface of the nodules and the parietal peritoneum. Stomach somewhat dilated. Pylorus healthy. No evidences of carcinoma were found in any other part of the body.

This case presented many points of interest.

(1) The presence of friction fremitus and friction sounds over the surface of the liver. These were very distinct, and I thought during life there must have been a large amount of perihepatitis. As stated in the post-mortem notes, the amount of perihepatitis was small, and confined almost altogether to the nodules. The friction sound must have been produced by the rubbing of the rough cancerous surface over the peritoneum, also roughed by localized inflammatory action. It is doubtful if in any other affection of the liver than cancer could such marked symptoms be found.

(2) The rapidity of growth of the secondary nodules in the liver. In my experience this is very common. I have known cases in which the disease ran its whole course in six or seven weeks.

(3) Although there were distinct signs of suppression of the bile-making function of the liver, tyrosin and leucin were not at any time found in the urine. This may, perhaps, have been due to the fact that the patient suffered most of the time from anorexia, and, as a result, he took a small amount of food, which consisted largely of milk.

The diagnosis of primary carcinoma of the liver or gall bladder was made during life for the following reasons: (1) There was no history of primary

cancerous disease in the pylorus cæcum, or sigmoid flexure or rectum. (2) There was a history of biliary colic, with inflammation of the biliary passages. (3) The absence of marked jaundice excluded the biliary passages.

We did not during life recognize the fact that the lower, smaller, and more prominent nodule, already described as existing in the upper margin of the right iliac fossa, was cancerous disease of the gall bladder, but we noted its early appearance. On post-mortem examination this tumor was found to be an outgrowth from the gall bladder, and this we therefore considered as the primary seat of the disease, and that the invasion of the liver was of secondary character.

The presence of the calculi explained the illness three years before. They were probably the exciting cause of the carcinoma.

Portions of the nodules in the liver and gall bladder are now being hardened for examination by the microscope. I am not, therefore, in a position to say what is the character of the carcinoma. In Musser's collection of one hundred cases of primary carcinoma of the gall bladder, in sixty-four the variety was clearly indicated. Twenty-three were encephaloid, nineteen scirrhous, six colloid, four villous, and twelve were cylindrical-celled epitheliomata. From the gross appearance, I would suppose this to be of the latter form.

The liver itself was enormously increased in size, 14 lbs. weight, in a man not weighing more than 80 lbs. In Musser's collection of cases, the liver was the seat of secondary deposits in fifty-four cases.

In a large proportion of cases the growth into the liver was by direct continuity. In this case it appears to have been by metastasis.

The bile ducts in this case were partially obstructed by continuity of the disease. In the fifty-four cases of metastatic growth, as given by Musser, the organs were affected in the following order of frequency: (1) Liver, (2) abdominal lymphatic, (3) peritoneum, (4) lungs, (5) stomach, (6) duodenum, (7) pancreas. In this case the growths were confined to the liver.

Causation. The age when the greatest number of cases occur is between 50 and 60. In ninety-eight cases, twenty-three were males and seventy-five females. The great preponderance in females may be due to sedentary habits and greater tendency to formation of calculi.

This patient, although a male, followed a very sedentary life, and was at the same time a hearty eater, which may have been one of the etiological factors.

Gallstones were present in sixty-nine out of the one hundred of Musser's cases. This probably does not represent all the cases of calculi, as in many they may have passed into the intestines during life. In no case has it been proved that true biliary calculi formed after the commencement

of cancerous disease. The large proportion of cases in which calculi existed previous to carcinoma would point strongly to their etiological importance. The glandular character of the lining membrane would explain the fact that malignant disease follows calculi in the gall bladder much more frequently than in the urinary passage.

A tumor was made out during life in 68 cases: In gall-bladder region, 27 times; attached to liver, 10; in umbilical region, 12; in iliac fossa, 4; in fluid, 2; in pylorus, 1.

In this case the primary tumor was found below the lower margin of the liver, but owing to the great development of the left lobe, or perhaps to previous adhesion, the growth was found lower down and more to the right than the usual situation of the gall bladder.

The suddenness and severity of the onset of pain in the attack which occurred three years before the commencement of the present one would lead to the conclusion that a partial rupture of the cystic duct might have occurred, and that this might have accounted for the subsequent peri-hepatitis. The bilious attacks from which the patient suffered were probably directly connected with the formation of calculi, and the presence afterwards of malignant disease.

CARCINOMA OF THE SCALP.*

BY H. J. HAMILTON, M.B., L.R.C.P. LOND.,
TORONTO.

THE patient, Mrs. S., æt. 58, from whose scalp the growth presented to-night was removed, came to my notice first on January 15, 1895. There was to be seen over the sagittal suture, a little in front of the posterior fontanelle, a sharply-defined growth, round or somewhat oval in shape, adherent to and, in fact, involving the skin, but movable upon the calvaria. It was extremely hard and somewhat nodular to the touch. The skin covering it was of a purple or violet color, and presented an old cicatrix over the centre of the tumor. There were no enlarged glands to be found. Her general health was good, and had not been affected by the growth, which, however, caused her a great deal of pain at times.

Seventeen years ago, at the site of the growth, a wen developed. This gave no trouble until about seven years ago. While the patient had her head out of the open window, it fell upon the wen, and, to use her own words, flattened it out. About six months later a small lump, about one inch in diameter, developed. It stood out prominently like a horn, was rough and brownish in color, and about three years later there was a discharge of dark blood. Six years after the accident, or about three years after this growth had begun to discharge, it was removed by caustics and plasters. After about two months' treatment it healed up, leaving a rough, corrugated scar. Immediately after healing, the present tumor, which measures about two and a half inches in one diameter and two inches in the other, developed, and has grown rapidly of late.

Family history is good. All deaths have occurred at old age, without any history of tubercle, cancer, or other tumors. There were two other wens on the head.

February 8, 1895. Removed the growth. It was sharply circumscribed, and did not seem to have involved the surrounding tissue to any great extent. It has healed nicely, and, up to the present time, there are no signs of recurrence.

*Read before the Toronto Pathological Society, April 27, 1895.

On examination, the tumor is hard and nodular, and, with the microscope, it is seen to be made up of a dense stroma of vascular connective tissue, in the alveoli of which are large masses of epithelial cells. According to the embryonal theory of the origin of neoplasms, this growth would belong to that class in which cells from the epiblast or hypoblast preponderate over those of the mesoblast, in contradistinction to the connective tissue type, in which the mesoblastic elements only are found. Since there is no typical glandular arrangement of epithelium, we would call it carcinoma, remembering, however, that there is no hard and fast line between that class and the adenomata.

In studying this or any other epithelial growth from an anatomico-pathological standpoint, we must be careful not to make use of such terms as scirrhus and encephaloid. They only have a clinical significance, and, even when used in that sense, are very misleading. To use such terms when speaking of the structure of a neoplasm is inaccurate. This is illustrated by sections of this tumor. Some show an abundance of connective tissue stroma, with epithelial cells within the alveoli. This is characteristic of the so-called scirrhus. In other parts of the growth, again, there is such a deficiency of stroma and so many cells that one could be excused for calling it a medullary or encephaloid carcinoma. Any classification of carcinomata must depend upon the amount, nature, and arrangement of the stroma, and upon the number and character of the cellular elements. Since these conditions are variable in different parts of the same growth and at different stages of development, the words scirrhus, encephaloid, etc., can only be used to indicate the predominant features. They have simply a relative significance histologically. Scirrhus, when used clinically, in reality has no significance other than that of hardness, and encephaloid simply means soft, and neither word in any way gives us any clear idea of the nature of the growth with which we have to deal.

The embryological theories advanced in order to explain the pathogeny of cancer are not held to-day by those who claim to have found the so-called cancer parasite, but until further proof is given to the contrary it seems rational to maintain that all neoplasms develop from cells of the blastoderm. The connective tissue type develop from the mesoblast, and include the fibromata, myxomata, lipomata, sarcomata, etc., all having their physiological types represented in the organism. The epithelial type develop from the three layers of the blastoderm, the hypoblastic or epiblastic elements predominating. In addition to these two great classes, we have combinations of both types in the congenital tumors and cysts of different kinds.

The epithelial growths include the adenomata, in which there is a stroma of connective tissue, in the alveoli of which epithelial elements

abound, and there is actual formation of typical gland structure. There are transition forms between the adenomata and carcinomata, in which the resemblance to gland structure is not distinct, and these pass into the next class, in which there is cell proliferation in the alveoli of connective tissue without any typical glandular arrangement.

The primary site of cancer remote from some glandular structure is, in the nature of things, an impossibility. The occurrence of primary carcinoma of the peritoneum, pleura, and pericardium, which is not infrequent, was for a time hard to explain, because it was, and to a large extent still is, believed that the flat cells lining these great body cavities are true endothelium, and closely related in origin, as they are in structure, to the genuine endothelium of the blood and lymph vessels. It was formerly thought that the great serous cavities were developed from the connective tissue layers of the mesoblast, but it is now almost generally conceded that the great primitive body cavity, which after a time became divided into pleural, pericardial, and peritoneal sacs, is originally an outgrowth from the alimentary canal, and therefore the so-called endothelial lining is in reality of hypoblastic origin.

Granting that all carcinomata owe their origin to the rapid proliferation of epithelial cells, we will endeavor to explain the origin of the growth before us.

The patient was told that the growth removed a year ago was cancer. I am of the opinion that it was not. It was probably a mass of exuded sebaceous matter, which had become pushed up from below and had taken the form of a cutaneous horn, or granulations may have sprung up from the interior of the sebaceous cyst, and exuded as a fungating mass resembling an epithelioma. The three factors, age, chronic irritation, and dislocated epithelium, if the term be allowed, are sufficient to account for the growth on the embryonal theory without assuming any microbic element. Hutchinson and Boyce claim that chronic irritation may originate cancer, whether it be of microbic origin or otherwise. Soudakewitch, Ruffer, Pfeiffer, Wickham, etc., claim that only microbic irritants are effectual. Adamkiewicz discredits the theory of epithelial origin, and claims to have proven by experiment that the cancer poison is formed in the cancer cell, and that the cancer cell is itself the parasite. Only negative results have as yet been reached in the many researches for the cancer microbe. These researches have demonstrated that under certain conditions various micro-organisms may find a suitable abode in cancerous growths, but these have nothing whatever to do with the causation of cancer (Williams). The agency of micro-organisms is no more necessary to account for the development of cancer than it is to account for the development of any of the normal epithelial structures.

Virchow considers that irritation is the fundamental cause of all new growths. This is not consistent with the doctrine he has adopted concerning the correspondence between the embryonic and neoplastic developmental processes.

Cohnheim's theory that the only cells capable of giving origin to the new growths are those which have been displaced during embryonic life does not seem to go far enough. It is more rational to believe that neoplasms may arise wherever undifferentiated cells are present, and that they are most prone to originate where these cells are most abundant.

One of two things is probable in this case, either that the irritation from treatment caused a proliferation of epithelial cells already displaced during embryonic life, or that some of these cells, having reached full growth, became grasped by the cicatrix, thus changing their surroundings as they exist normally in the body. Under ordinary circumstances certain cells, whose function it is to replace others which have fulfilled their destinies, as in the skin, possess, to a greater or less degree, the character of embryonal cells; and, while in the struggle the growth of these cells may be held in check by conditions of pressure, nutritive supply, etc., if these conditions be altered, these cells may undergo proliferative changes as significant as those of the alleged sequestered cells of Cohnheim. These cells, whether grasped by the cicatrix or not, grow and reproduce more rapidly than the others around them without any attempt at specialization and regardless of the requirements of the adjacent tissues. The more highly organized the structure the more slowly do the cells reproduce, and the approximation to the normal type is greater. In the one extreme we have a simple adenoma, a benign neoplasm; and in the other, where there is no orderly arrangement of cells, where, in fact, there is an attempt at the production of gland tissue, only reaching the earlier embryonic stage in that line of evolution, we have the carcinomata. The dividing line is not drawn sharply between them histologically, nor can it be done clinically. While these latter growths are spoken of as malignant, one class runs insensibly into the other, or a benign tumor may, by a process of development, become more cellular, the reproduction of cells may become more rapid, and typical arrangement may be lost, thus giving what is considered a neoplasm of the malignant type.

It is a mistake to speak of this as malignant degeneration. It is in no sense of the term a degeneration. The neoplastic cells give evidence of excessive vitality manifested by exaggerated and imperfect proliferation. They are larger than normal cells and the nuclei are also increased in size. The cells present no degenerative changes. The necrobiotic lesions which may be met with are secondary, and are only produced when the mass of the neoplasm is out of all proportion to the provisions made for its nutri-

tion. These are really cases of disease of the tumor. Verneuil and others claim that all retrograde processes in cancer are due to micro-organisms. New growths would be much more common than they are were it not for the restraining forces which the organism possesses. It is probable that the organism does not lose some of this inductive moderating power, but that the neoplastic cell has lost its receptivity to this influence. This incapacity of the cell to receive this inductive effect may be hereditary. This may be the rôle played by heredity in the pathogeny of cancer. The restraining influence of the organism may become diminished by age, or the incapacity of the neoplastic cell to be influenced may be increased, thereby accounting for the part that age seems to take in the causation of new growths. To illustrate this we have the tendency of warts, moles, and congenital tumors to take upon themselves malignant development in old people.

In reference to the association between primary cutaneous cancer and chronic irritation or pre-existing disease as a cause, the results of researches made by Volkmann differ materially from Williams' report of forty consecutive cases of primary cutaneous cancer under his own observation. In Williams' cases 11 or 27.5 per cent. were associated with pre-existing disease, cicatrices in four cases, congenital lesions in two, suppuratory cyst, soot-wart of eighteen years' duration, recent wound and chronic sinus each in one case. Volkmann found pre-existing disease in 88 per cent. of 223 cases, but these were not consecutive cases, but were cases recorded at different times by various observers, for the purpose of showing the relation between pre-existing disease and primary cutaneous cancer. When we fail to find chronic irritation in such a large percentage of cases of cancer we cannot with safety say that repeated irritations of long duration are necessary antecedents of cancer, though they are often precursors of it. We are only justified in believing that parts chronically irritated may be more likely to take on neoplastic development.

TREATMENT OF DIPHTHERIA BY ANTITOXIC SERUM— REPORT OF NINE CASES.

BY GEO. CLINGAN, M.D.,
TORONTO.

THE following nine cases I have been privileged to see and asked to report.

In all cases where the disease was only pharyngeal antiseptic sprays were used, in some peroxide of hydrogen diluted to suit the individual case; in others pyrozone also diluted; while in others there was used a solution of bichloride of mercury 1-1000 or 1-2000.

In any case where the larynx became involved the patient was put in a steam tent and had calomel sublimed at regular intervals.

With all the common stimulants, whiskey and liq. strychniæ, were used in such quantities as the case demanded.

The surroundings of the patients were all that could be wished.

CASE 1. Boy, æt. 13 years. Had had osteomyelitis nine weeks. Operated upon January 25, 1895, for necrosis tibiæ. On March 17 had immunizing dose of serum, *mxv*. No change in condition between this and March 23, when constitutional symptoms pointing towards diphtheria began to show themselves. Temperature, pulse, and respiration keeping about as usual since operation. On this date (March 23), the patient having complained of soreness of throat, on examination membrane was found. A culture from this was made, and Klebs-Loeffler bacillus and streptococci shown to be present. March 24, constitutional symptoms were increased in severity, though there was little cervical adenitis. Membrane covered both tonsils, and there were two small patches on soft palate. Evening temperature $102\frac{4}{5}^{\circ}$. Serum 25 c.c.—New York brand—injectd. Erysipelatous rash at seat of injection appeared in a few hours, followed by swelling and pain, lasting several days. Throat clear in ten days. No sequelæ.

CASE 2. Boy, æt. 5 years. When first seen—December 3, 1894—parents complained of his having had "croup" for over two days. As the constitutional symptoms were severe, diphtheria was suspected. No membrane was to be seen in the throat, and 25 c.c. of serum injectd.

On morning of 3rd December, temperature was $101\frac{1}{8}^{\circ}$, pulse 142, respiration 48; in evening, temperature $102\frac{4}{5}^{\circ}$, pulse 138, respiration 48; following morning, December 4, temperature 102, pulse 126, respiration 40; evening, temperature $104\frac{2}{5}^{\circ}$, pulse 140, respiration 42. Died on December 5, temperature reaching $105\frac{2}{5}^{\circ}$. Post-mortem examination showed membrane on larynx, trachea, and bronchi.

CASE 3. Girl, æt. 13 years. Case of epulis. Temperature, pulse, and respiration had ranged about normal. March 16, 1895, without any apparent constitutional disturbance, became hoarse and had slight dyspnoea. March 17, evening temperature 103° . Antitoxic serum, (Behrings) 25 c.c. injected. Morning of 18th, temperature $99\frac{2}{5}^{\circ}$. No bacteriological examination made. For the week following, temperature varied between $99\frac{2}{5}^{\circ}$ and 100° . No change in rate and character of pulse. Voice entirely clear on March 23. No unfavorable complications or sequelæ.

CASE 4. Girl, æt. $1\frac{1}{2}$ years. Patient had had enterocolitis. On March 21, 1895, it was discovered the patient had membrane on both tonsils and some on soft and hard palate. Considerable enlargement of cervical glands. Bacteriological examination showed an almost pure culture of the Klebs-Loeffler bacillus. Serum injected on evening of March 21—the second day of the diphtheria—15 c.c. Temperature morning of March 21, 104° , evening $99\frac{4}{5}^{\circ}$; morning temperature of March 22, $104\frac{4}{5}^{\circ}$, pulse 85; evening temperature $103\frac{2}{5}^{\circ}$, pulse 160. Patient became progressively worse, there being gangrenous ulceration in mouth. Death occurred on March 25. The seat of the injection became black about twelve hours after the use of the serum, and remained so till death. The post-mortem examination showed gangrene from tonsil over alveolar margin of superior maxilla on left side, some teeth having fallen out.

CASE 5. Boy, æt. 9 years. Had been operated upon for suppurating cervical glands, after which temperature had ranged about 99° . On March 17 had an immunizing dose of antitoxic serum, *mxv*. On March 23 membrane seen on throat. Bacteriological examination showed Klebs-Loeffler bacilli and streptococci. Cervical adenitis was made no worse. On March 24 both tonsils, hard and soft palate, had membrane on them; 25 c.c. serum injected; no appreciable response; membrane disappeared in twelve days. Slight paralysis rendering swallowing of fluids difficult, there being a regurgitation into the nose, and there also being a nasal note in the voice.

CASE 6. Boy, æt. 4 years. On January 28, 1895, had one kidney removed for sarcoma; was very weak after this, but apparently had begun to recover. On February 10 showed some extra indisposition. February 11 membrane seen on throat. Bacteriological examination showed Klebs-Loeffler bacillus; 15 c.c. serum injected in divided doses. On February 12 additional 15 c.c. at single dose injected, patient in mean-

time having shown some laryngeal involvement. Total amount used, 30 c.c. Between February 12 and 14 temperature ranged between 99 and $102\frac{4}{5}^{\circ}$; pulse, between 156 and 180. After this temperature did not rise above 101° , nor fall below 90° . Death occurred February 20. In addition to membrane seen on tonsils and post wall of pharynx, there was some just below the vocal cords.

CASE 7. Girl, æt. 9 years. Operated upon March 6, 1895, for cleft palate. Temperature and pulse ranged about normal till March 16, when temperature rose to $103\frac{2}{5}^{\circ}$, and pulse to 128. March 17, morning, temperature, $98\frac{2}{5}^{\circ}$; evening, temperature, $100\frac{2}{5}^{\circ}$; pulse, 120. Painful cervical adenitis present, afterwards these enlarged glands suppurated. Same day (March 17), second of disease, membrane covering both tonsils, and also on hard and soft palate and on posterior wall of pharynx; membrane covered line of incision along the line of the cleft; 25 c.c. serum Behring's injected. Membrane disappeared on March 29, thirteen days after appearance. On April 17 took a journey home by railway, about twenty-five miles. On April 22 died of heart failure. While under treatment for diphtheria required vigorous stimulation.

CASE 8. Girl, æt. 3 years. Treated for five weeks for inanition, bringing time up to March 19, 1895, on morning of which day temperature was $98\frac{2}{5}^{\circ}$; pulse, 108. Hoarseness appeared. For two weeks temperature had been about normal; pulse, 85 to 110. Evening of March 20 temperature was $100\frac{3}{5}^{\circ}$; pulse, 152; respiration, 24. Morning of March 21 temperature was $101\frac{2}{5}^{\circ}$; pulse, 168; respiration, 36. No membrane to be seen. March 21, second day of symptoms, 15 c.c. antitoxic serum injected. Patient died on March 27, becoming progressively worse up till time of death, the pulse reaching 168 and the respirations 48 per minute. Post-mortem examination showed membrane over larynx, trachea, and into finer bronchioles. Bacteriological examination showed Klebs-Loeffler bacillus.

CASE 9. Woman, æt. 30 years. Had nursed a child with diphtheria, becoming somewhat fatigued, and on February 13, 1895, felt seriously indisposed. Morning of February 14 temperature was $102\frac{4}{5}^{\circ}$; pulse, 78; evening, temperature, $103\frac{4}{5}^{\circ}$; pulse, 82. Membrane appeared on tonsils, post wall of pharynx (partly covered), and a small piece on soft palate—uvula streaked and very cedematous. The whole throat was very deeply congested and very painful, and very considerable cervical adenitis present; appetite became very poor. An examination of membrane showed Klebs-Loeffler bacillus. On February 15 first injection of antitoxic serum was given, to which there appeared to be some favorable response, some small pieces of membrane becoming detached from posterior wall of pharynx on the following day, the temperature also falling a little. Imme-

diately after the injection the patient was very much exhausted. Last injection of serum was given February 20, a total of 65 c.c. having been administered. February 21 the seat of the injections became swollen and itchy, and crissipelatus-looking, while the following day a rash resembling that of measles appeared over the whole body. The itchy parts became very painful, the pain extending into the surrounding soft parts and into the neighboring joints. The temperature remained high, reaching $104\frac{2}{3}^{\circ}$ and declining slowly. After that following the first injection there did not seem to be any response to the injections of the antitoxic serum. Two weeks after the last injection the temperature reached normal, the membrane having disappeared twelve days after its appearance. The pulse at no time rose above 102, the usual range being from 88 to 96 per minute. After recovery there was some pain on attempting to use the eyes, and there was also some difficulty in swallowing fluids.

SUMMARY. Of the nine cases cited death occurred in five, recovery in four. One case had apparently recovered, but died subsequently of heart failure.

In the one adult the diphtheria ran a very severe course.

One laryngeal case—and, hence, only supposed to be diphtheritic—(Case 3)—responded immediately to treatment.

Rash appeared at seat of injection in the cases, and, in two, obstinate pain—in one at seat of injection alone, and in the other in surrounding parts as well.

Those cases in which the serum had been given a week previous recovered, though the throat symptoms were severe.

In one case where death occurred, and where throat symptoms were more severe than in any other case, the culture was almost pure Klebs-Loeffler. (Case 4.)

The membrane spread in some of the cases after the injections of serum.

REPORT OF ONE HUNDRED AND FORTY-FIVE OPERATIONS DONE FOR REMOVAL OF OVARIAN TUMORS AND PATHOLOGICAL CONDITIONS ASSOCIATED WITH THE OVARIES AND UTERINE APPENDAGES ONLY.*

BY A. VANDER VEER, M.D.,

Professor of Didactic, Abdominal, and Clinical Surgery,
ALBANY, N.Y.

(Continued).

CASE 55. Mrs. A. R., family history negative. Patient always in good health. Menstruated at fifteen; regular; menopause at thirty-seven. Ten children; one labor tedious and painful. May, 1891, first noticed enlargement of abdomen, which grew rapidly, causing dyspnoea and pain. Cœliotomy, October 6, 1891, before class; multilocular ovarian cyst; trocar in sac and gallon grayish, fœtid pus removed; pedicle ligated and cut away; removal of both ovaries; peritoneal cavity flushed with hot water; drainage tube lower end wound, packed with iodoform gauze—removed second day; fourth day, in absence of nurse, patient got up; same next day, with no inconvenience except increased heart's action—120. Gained gradually; homesick and discontented and allowed to leave on the eleventh day. Recovery excellent.

CASE 56. Mrs. N. P., family history of consumption and cancer; well when young; menstruated at fourteen—regular, except at seventeen, when she had amenorrhœa for three months; no children; no miscarriages; 1889 doctor noticed tumor in right side; aspirated winter of 1891, through vagina, discharging for a long time; lost flesh; appetite good, bowels regular. Cœliotomy, October 8, 1891; abscess in layers of broad ligament; aspirated—about six ounces of pus removed; great adhesions to intestines; glass drainage; nausea and vomiting for two days—improved after that rapidly; rubber tube substituted for glass few days before she went home, when she felt very well. Discharged twentieth day. Gained rapidly in flesh and strength; was well for nearly a year;

then had an attack of pelvic peritonitis, followed by abscess, and died, I am informed, of sepsis.

CASE 57. Mrs. E. J. L., mother died of consumption, aged forty; indefinite history of dropsy. Menstruated at fifteen—regular before marriage at twenty-three. Since flow prolonged and lasting six days; sometimes overruns two or three weeks; once sixteen months. Feet wet eight years before operation, when the flow was excessive. One child, nineteen months old. Two attacks of peritonitis—rheumatic troubles occasionally. First noticed tumor right side of abdomen after birth of child—grew rapidly the following summer. Slight dyspnoea. Cœliotomy, October 15, 1891. Unilocular ovarian cyst; six quarts of fluid removed; pedicle ligated and tumor removed with both ovaries; suffered second day from nausea and vomiting—lasting two days. Patient did well after this; stitches removed sixth day; sat up twelfth day. Regained strength very rapidly, and went home on sixteenth day.

CASE 58. Miss I. R., æt. 19; family history good. Confined to bed part of time during menstruation. Diagnosis of chronic ovaritis with salpingitis and operation advised. Cœliotomy, October 19, 1891; left ovary much atrophied; removed with tube; right undergoing cystic degeneration, also removed with tube; much nausea and vomiting; considerable pain in abdomen after operation, but soon recovered; had uneventful convalescence, returning home on twentieth day. Three months after began to vomit—though having gained much in flesh and strength—which continued more or less until patient finally died with all the symptoms of cancer of the stomach, one year after operation.

CASE 59. Miss L. L. McC., same patient operated upon October 7, 1890. November 9, 1891, not having improved, second cœliotomy performed; left ovary, size of hen's egg, found undergoing cystic degeneration, and removed with tube; patient much nauseated for several days, after which she made an uninterrupted recovery. Discharged on twenty-ninth day. In excellent state of health August 1, 1894.

CASE 60. Miss K. E. M., father died of consumption, aged fifty; history otherwise good; menstruated at fourteen; regular. October, 1890, noticed distension of abdomen, which increased; no pain until summer of 1891, then some in right inguinal region. Cœliotomy, November 24, 1891; unilocular ovarian cyst; eight quarts of yellow fluid removed; tumor from left ovary; pedicle tied; right ovary cystic and removed; dressed as usual. Patient improved rapidly without any disturbance, and discharged on fifteenth day.

CASE 62. Miss L. McK., cystic degeneration ovaries; pelvic peritonitis—salpingitis; removal uterine appendages—many adhesions; recovery; bowels moved fifth day; stitches removed seventh day. Discharged twentieth day.

CASE 63. Mrs. M. B. M., æt. 33; family history negative. Since birth of first child, November, 1888, has had severe attacks of peritonitis, with constant pain, more or less severe; no permanent improvement under continuous treatment; I saw her with family physician, December, 1891, agreeing with him as to diagnosis of pelvic peritonitis with probable pyosalpinx. Cœliotomy, December 14, 1891; tubes very much enlarged, distinct pyosalpinx right side, ovaries in a condition of cystic degeneration, many adhesions and a tedious operation; glass drainage tube; good recovery, and discharged thirty-second day. In good health up to October and November, 1893, when she had a discharge from vagina very much like menstrual flow. Repeated once during winter of 1894, Dr. Pond, family physician, previously discovering cystic enlargement connected with right cornu of uterus. Aside from this, patient in excellent health. I saw her in May, 1894; no return of discharge; uterus seemed atrophied somewhat, but in good position; otherwise pelvis presented a normal condition.

CASE 64. Mrs. F. E. D., paternal grandmother, died of cancer of uterus—otherwise, history negative. Diseases of childhood—otherwise healthy. Menstruated at twelve—regular—pain at first. Married at sixteen years; first child ten months after; four born; youngest, two and one-half years. September, 1890, pain low down in pelvis, left side; flowed two weeks; in bed three; since severe pain, continuously increasing in area; more severe during monthly periods. Cœliotomy, January 2, 1892; oöphorectomy; tubes enlarged, containing pus; ovaries enlarged and cystic. Drainage; oozing for a few days. Rallied quickly; good recovery. Discharged fifteenth day.

CASE 65. Mrs. D. B., phthisis on mother's side; otherwise history negative. Diseases of childhood. Menstruated at thirteen; regular until eighteen, when married. First child at nineteen; second, at twenty-three. Since birth of first child, very weak; pain in back, and right inguinal region—some leucorrhœa. Cœliotomy, January 26, 1892. Miliary tubercles over peritoneum; right ovary removed—tubercular; drainage; wound dressed in usual manner. Patient rallied nicely; continued to improve constantly; drainage tube removed on seventh day; went home on twenty-fifth day, very much improved and stronger. Good health in fall of 1894.

CASE 66. Mrs. M. K., æt. 27; personal history good; family history of phthisis; one sister had tumor of neck. From 1882 to 1888 noticed abdomen distended at menstrual periods, decreasing a few days afterwards; but, in 1888, increase more prominent on left side. January 30, 1892, diagnosis of ovarian tumor. Cœliotomy, February 2, 1892. Unilocular cyst of right ovary; very broad pedicle; dermoid cyst con-

nected with left ovary; removed. In closing incision hæmorrhage presented from pedicle on right side; controlled by chain stitch, and using fine silk for stitching over and over the peritoneal surfaces. Patient reacted well. Visited her at 4 p.m., and her condition led me to fear internal hæmorrhage; she was restless; pulse, 140; immediately reopened, but only about one ounce of bloody serum in cavity of pelvis; ligatures, etc., in good condition. Drainage introduced; patient recovered during night; following day seemed much better, but heart's action weak, although other conditions favorable, and she died unexpectedly February 8 at 5 p.m. Autopsy revealed cause of death to be pulmonary embolism of right lung, with clot in right heart. I believe it was a great mistake, on my part, to reopen the peritoneal cavity. It was an additional shock to the patient, and, if avoided, she might have recovered.

CASE 69. Mrs. F. S., tubercular peritonitis. Removal of uterine appendages March 9, 1892. Recovery. Discharged thirty-first day. This patient had some symptoms of a return of her disease a year later.

CASE 70. Miss B. C., tubercular peritonitis. Cœliotomy, April 8, 1892. Removal of uterine appendages—drainage tube packed often. Removal of sutures on twelfth day. Recovery. Discharged thirty-second day. After history satisfactory.

CASE 72. Mrs. A. H., family history negative. Diseases of childhood. Menstruated at thirteen; regular, profuse. Typhoid fever at ten. January, 1891, sharp abdominal pains—constipated two years—micturition normal; lost flesh. Cœliotomy, May 26, 1892. Large trocar introduced; removed four gallons of fluid; cyst adherent in several places—pedicle in right ovary—adhesions ligated; drainage inserted. Patient recovered nicely. Discharged thirtieth day.

CASE 73. Mrs. L. G., æt. 42; family history negative. July, 1891, severe pain in region of right ovary; repeated attacks, followed with vomiting. Two years after first attack abdomen enlarged; May 27, 1892, patient measuring forty-six inches around umbilicus; large quantity of sugar in urine; specific gravity, 1038; however, I was induced to operate, and cœliotomy was performed May 29, 1892. Multilocular ovarian cyst from left ovary; glass drainage; removed second day. Until this time no unfavorable symptoms; secretion of urine abundant; specific gravity, 1030; color unchanged, etc., but large quantity of sugar present. Amount passed second day, twenty-four hours after operation, fifty-six ounces, when secretion suddenly ceased; patient sank into comatose state, dying in the night on third day after the operation. Truly, this was a case not suited to any operative interference, and should have been left alone, or merely tapped.

CASE 74. Mrs. I. L., father died of cancer in stomach; otherwise

history negative. Diseases of childhood. Menstruated at fourteen; normal; 1885, severe pain in right ovary, aggravated when riding or walking; attack lasted one year; in 1891, abdomen enlarged; continued until operation. In April, 1892, raking in yard, when seized with severe pain in right side; continued for several days; enlarged more rapidly after this. Coeliotomy, June 15, 1892. Cyst wall laid bare, trocar introduced, and two gallons of fluid removed, tumor from left ovary adherent in several places; left ovary and tube removed; abdomen flushed with warm water; six-inch drainage tube inserted, packed with iodoform gauze. Patient made excellent recovery. Discharged twenty-ninth day. In good health June, 1894.

CASE 76. Mrs. L. C. B., paternal grandmother died of cancer. Patient well and strong. Menstruated at fifteen; regular until menopause at fifty. Since flowed irregularly until the age of sixty. Ten children; two miscarriages. March, 1891, first noticed pain and growth in right side, ovarian region; not definitely located in one spot. Gradual enlargement of abdomen, but pain and soreness left after a few weeks, returning in March, 1892. September, 1892, very little pain in abdomen; vomited some; persistent insomnia. Coeliotomy, September 30, 1892. Large multilocular ovarian cyst in right side removed; one or two cysts emptied in peritoneal cavity. Fluid clear in color; sixteen pints; drainage tube removed in twenty-four hours; vomited fourteen hours. Good recovery. Discharged thirteenth day.

CASE 77. Mrs. H. G., æt. 40, widow, family history of phthisis. Menstruation always accompanied with more or less nausea, with vomiting. Married at thirty-six. Husband dissipated; married life not happy. September, 1890, had first attack of pelvic peritonitis, three months after abdomen enlarged, left side, in broad ligament; another attack of pelvic peritonitis six months after first, tumor gradually enlarging. December 11, 1891, suffered from all symptoms of suppuration. At one time patient was able to get out, came to my office, and I confirmed her physician's diagnosis as that of double pyosalpinx, with pelvic abscess, origin probably specific. Coeliotomy, October 10, 1892. Double pyosalpinx, removal of uterine appendages very tedious. They were the largest, and abscess cavity greatest, of any specimen I have ever removed. Glass drainage; discharge on examination gave evidence of gonococci being present. Patient rallied well from operation, all seemed well up to end of fourth day, when vomiting began, presenting evidences of peritonitis with great exhaustion; died at end of sixth day.

CASE 80. Miss E. W., æt. 24. Decided history of phthisis. Patient had well-marked lateral curvature with rotation. Menstruation more or less irregular, during which time abdomen enlarged for three days,

and she suffered much pain. Increase more rapid after 1891. Cœliotomy, November 1, 1892. Multilocular cyst, right ovary; broad pedicle. Some adhesions, but not firm; drainage; vomiting not well controlled. Intestinal obstruction on third day, not relieved by any line of treatment, and patient died end of fifth day. Death caused by adhesions between small intestine and stump of pedicle.

CASE 81. Miss E. W., paternal side tubercular. Patient had very severe nose bleed; bleeding stopped at age of twelve, when menstruation began; but patient suffered sharp pain in back. 1891 noticed enlargement of abdomen, which increased rapidly. Attacks of dyspnœa. Cœliotomy, November 3, 1892. Diagnosis of multilocular ovarian cyst confirmed; fluid clear and straw-colored; pedicle ligated; incision closed. Wound healed by first intention; no drainage. No complications. Patient sat up seventh day, when stitches were removed. Discharged twentieth day.

CASE 84. Mrs. E. G., family history good, with exception of father, who died of consumption. Patient well and strong; worked very hard. Menstruated at twelve; ceased; again regular at sixteen, until 1884, when pregnant. 1888, first noticed pain in left side, region ovary, to pubis and knee. Trouble in passing urine. Bowels very constipated; worse at times. October, 1892, movements once in eight or nine days. March, 1892, very severe pain until June, then patient went to Troy, undergoing operation for "falling of womb." In bed four weeks. When lying down sensation of difficulty in breathing; vomited everything placed in stomach unless in standing or sitting position. Flowed after operation more or less. Upon movement patient felt something move in abdomen, giving sensation of bag filled with water. Cœliotomy, January 16, 1893. Cyst presented, fluid removed; not many adhesions; different cavities of multilocular cyst emptied. Pedicle ligated, including left ovary. Degenerated ovary, right side; tube, containing pus, removed. Patient rallied well. Discharged nineteenth day.

CASE 85. Miss F. W., father died of gastritis, maternal grandmother of cancer stomach. Patient well and strong. Menstruated at twelve, regular to one year ago, flow scanty every three weeks. 1889 abdomen became distended, gradually increasing. Contents of abdomen and contour changed one side to other when changing position. Sense tension over abdomen and down thighs. Cœliotomy, January 18, 1893; ovarian cyst, removed, with right ovary. No adhesions. Left ovary healthy and left. Recovery uneventful and discharged twenty-first day.

CASE 86. Mrs. M. B., æt. 40; father died of dropsy, otherwise family history good. 1888, had peritonitis, more or less distension following; no further pain until 1892, when soreness appeared in region of umbilicus. Continued for two months, gradually left, but abdomen continued to dis-

tend. December 21, 1892, was tapped, five gallons of thick yellow-like fluid being removed. Remained in bed three days. Fluid continued to ooze from opening made by trocar for several days. Distension of abdomen not greatly relieved, but passed urine more freely and bowels moved readily. January 16, 1893, saw patient with family physician. Measured nearly sixty-three inches at umbilicus, so tense and full it was impossible to distinguish between ascites and possible tumor, but from nature of tapping I believed she had a multilocular ovarian cyst. Pelvic examination of very little assistance, patient being so fleshy cervix could scarcely be reached. Coeliotomy done January 18, 1893, at 11 a.m. Some ascitic fluid removed, multilocular cyst of left ovary found, larger sac emptied twenty-seven pints thick, dirty fluid. Several smaller cysts opened, and with sac weighed nearly four pounds. Patient found about four months pregnant, although she gave no rational symptoms of this condition. Right ovary and tube normal. She did nicely for forty-eight hours, when she suddenly developed active uterine pains and abortion, having sharp post-partum hæmorrhage. Although pulse was good, and she rallied well from miscarriage, she kept up a constant state of worry, and died January 23. Could this case have been reached earlier, particularly after first tapping, I believe her chances for recovery would have been very good.

CASE 87. Mrs. F. K., family history good. Menstruated at twelve; regular. One child; no abortions. 1885, while pregnant, fell, but did not hurt herself much. Soon after pain came in left ovarian region—more at times than others—when at work. After birth of child somewhat worse. Pain continued; sometimes could feel bunch seemingly deeply located at umbilicus—left side—this region sore to touch. April, 1892, growth higher up in iliac region; growth more rapid two months previous to operation. Coeliotomy, January 23, 1893. Tumor presented; nine pints darkish fluid removed with sac and left ovary; pedicle tied as usual—no adhesions. Upon examination of right ovary small cyst was found very adherent and held down firmly. This cyst was also removed and pedicle ligated. Closed as usual. Patient made splendid recovery. Discharged twenty-third day.

CASE 88. Mrs. A. W. K., family history fair. Menstruated at thirteen; always pain till age of twenty, when child born—afterward menstruated regular. Had acid dyspepsia, but general health better. 1885, fibroid tumor uterus diagnosed. Menopause at thirty-five. 1887, abdomen began to enlarge, but did not pay much attention to increase in size till Christmas, 1892, when she began to have severe pain in left side and groin. For three weeks before operation she was not able to lie down at night, but slept in large chair. Since Christmas 1892, enlargement was very marked. Was

consulted December 31, 1892, and advised an operation. Coeliotomy, February 2, 1893. Removed about twenty-five pints of dark fluid and large multilocular ovarian tumor from right side; found tube and ovary in left side perfectly normal. Slight adhesions. Recovery. Discharged twenty-eighth day.

CASE 89. Mrs. D. S., æt. 34; family history negative. Mother of three children—five miscarriages. March, 1892, very ill, giving history of probable pelvic peritonitis. Husband dissipated, and treated for specific urethritis. August, 1892, patient had another similar attack. I saw her November 7, 1892, advising removal uterine appendages, believing case one of double pyosalpinx, having specific origin. She did not reach hospital until February 8, 1893, growing constantly weaker. Coeliotomy, February 11. Tubes very much distended, filled with pus; large abscess on left side. Sac attached to rectum, very serious adhesions; operation long and tedious, but finally completed, cavity thoroughly flushed with hot saline solution and left in nice, dry condition, all bleeding points having been controlled. No drainage. Patient reacted well, kidneys did their work well, very little vomiting, and symptoms seemed favorable, but patient died in condition of exhaustion on third day.

CASE 90. Mrs. E. D., family history negative. Menstruated at thirteen; normal. Inflammation of the bowels when sixteen; for two years following having attacks of malaria in summer. At twenty attacks of bronchitis and asthma, occurring at intervals. February 28, 1891, had bearing-down pain, increasing every month until May, when patient had pneumonia (doctor called in for uterine pain). Breasts became so large she could not wear corsets; abdomen bloated, pain in back, and circulation poor. Under local treatment for three months patient was relieved, but at end of this period pains came on again, increasing every month. In May, 1892, Dr. Brownell, Oneonta, N.Y., dilated cervix, but pain continued, although treatment carried out. Saw her October, 1892; thorough cervical dilatation, but patient unable to wear stem pessary on account of pain; every month since pain increased in severity at flow. Coeliotomy, February 13, 1893. Pyosalpinx, both sides; parovarian cyst and structural change in left ovary. Removal of uterine appendages. Stitches removed on twelfth day. Discharged on twentieth day. This patient finally made a good recovery, though having some of her old pains for a year afterward.

CASE 91. Mrs. A. W., family history good. Menstruated at fourteen, accompanied with pain for the first three months; later painless until birth of second child. At eighteen confined to bed with what physicians termed kidney disease. Passed urine frequently, but small amounts; leucorrhœa. Since birth of second child has had severe pain over ovarian region,

especially marked on left side. August, 1892, sudden stoppage of menstruation. Had cold, then high fever; lost much flesh; delirious for six hours. Constantly thirsty; passed a large quantity of urine. Prolapsed ovary on left side. Her physician stated that during the summer of 1892 urine contained sugar; previous to operation repeated examinations failed to reveal any. Coeliotomy, February 16, 1893. Left ovary prolapsed and degenerated, showing beginning of tumor. Right ovary cirrhotic, with parovarian cyst near. Right duct stenosed markedly about one and one-half inches from ovary. Removed uterine appendages. Discharged cured March 4, 1893. Patient is in excellent health, June, 1894.

CASE 92. Mrs. K. W., family history good. Menstruated fourteen to fifteen—no trouble—no children—no miscarriages. February, 1891, had quivering pain in left side, then went to the other side, pains increasing every month. Consulted Dr. Magee, of Lansingburgh, who diagnosed ovarian trouble. Went to bed till August, 1892. In February, 1893, pains came on again, and I saw her March 13, 1893, devising operation; coeliotomy, March 18, 1893. Both ovaries in a state of cystic degeneration and removed. Vein in abdominal wall bled quite a good deal. Dr. Macdonald put in two deep sutures, stopping all bleeding. Firm adhesions. Recovery. Discharged on twenty-first day. Year later was doing well.

CASE 93. Mrs. S., æt. 27. Confined normally about two weeks previously. Chills on the fourth day, with high temperature; consulting physician curetted uterus thoroughly; some detritus. Patient improved, but relapsed in a few days, when second curetting was done. Case finally concluded to be one of pyosalpinx, I was telegraphed for, prepared to operate. No abdominal distension, temperature one hundred and four and upwards, decided chills, severe perspiration; no evidence of general peritonitis; bowels moving, but local tenderness over pelvic region. Uterus well contracted. Coeliotomy, April 19, 1893. Right ovary and tube enlarged, giving evidence of septic trouble, and removed. Good recovery from operation, but slight tendency to suppuration of one superficial stitch. Chills not controlled. Every medical aid given, but patient gradually grew worse, dying on fourth day after operation. Examination of ovary removed did not reveal any marked septic suppuration. Case probably one of true septicæmia.

CASE 94. Miss J. K., family history of phthisis. Patient rather delicate. Menstruated, October, 1892; regular until February, 1893, when no flow up to the time of operation. In February pain in right side, distending abdomen; increased after walking or meals, but improved by aiding digestion. Abdomen enlarged, and more or less pain. Coeliotomy, May 2, 1893. Diagnosis of tubercular peritonitis confirmed. Incision made and drainage continued. Patient left hospital on the twenty-eighth

day. Later gave evidence of returning symptoms of disease, but afterwards improved.

CASE 95. Mrs. P. D., grandmother died of cancer, otherwise history good. Patient always healthy. No children—no miscarriages. Menstruated regularly. First noticed enlargement of abdomen in 1891, about median line; some pain in left groin, never severe. Enlargement increased in size, but did not influence her general health. Always able to do her work. Last few months distension somewhat more rapid. Cœliotomy, May 4, 1893. Diagnosis in left ovarian cyst confirmed. Cyst removed. Bowels moved on second day. Recovery uneventful. Discharged on twenty-third day.

CASE 96. Mrs. E. P., æt. 50, family history of cancer. 1879 ovarian cyst removed from left side by Dr. Thomas, of New York; menstruation normal until menopause, just previous to second operation. 1889 right side began to enlarge until she was very much distended. Diagnosis of multilocular ovarian cyst. Cœliotomy, May 16, 1893. Diagnosis confirmed. Uneventful recovery. Discharged on fifteenth day. Case of interest simply in being second operation, last incision being made through old cicatrix, which was found in good condition.

CASE 97. Mrs. I. P., family history very good. Patient had grippe, 1889, health not good since. Menstruated at eleven; regular until two months previous to operation; since flow increased. September, 1891, first child was born; no miscarriages. August, 1892, had what she thought a miscarriage, but attending physician considered it an abdominal tumor. After this period I noticed some enlargement of abdomen, but at menstrual periods seemingly less. Prolapsus since birth of child. Worse in May, 1893, and confined to bed. Severe pain in side and lower part of back. At first occasional severe pain, but three weeks previous to entering hospital was very severe. July 20, 1893, saw patient; general peritonitis and so critical I tapped her, removing 108.5 c.c. coffee-colored fluid. Great relief followed, having good effect, with other treatment, in controlling peritonitis. Cœliotomy, July 24, 1893. Multilocular ovarian cyst; tapped from within, several places, to admit of removal. Adhesions very slight; easily separated by hand and sponge. Glass drainage; removed on following morning; little, if any, discharge. July 28, stitches removed; patient discharged on August 12, doing well. Patient gave history of morning sickness, some nausea during day, but certain she was not pregnant and general report against such being the case, still uterus gave evidence of about three months' pregnancy. In pelvic examination could isolate uterus, which was enlarged, and I said to her husband and friends I thought she might be pregnant. Later, this patient presented all the signs of pregnancy, and was delivered at the time of a fine, healthy child, since which time she has been in perfect health.

CASE 98. Mrs. M. F., father died of cancer, aged sixty; otherwise family history good. Menstruated about fourteen; regular. No children; no miscarriages; no serious illness, with exception of smallpox. Says, however, at four years of age she had an abscess in her side. March 25, 1893, took suddenly sick in the night; feeling of weakness; next morning fainted several times, also vomited slightly. Eating caused cramps in the abdomen. Diagnosis, tubercular peritonitis, confirmed when coeliotomy done September 7, 1893. Peritoneum extremely adherent to underlying structures. Large sac presented, first supposed to be a cyst; to settle this point it was tapped and some fecal matter and gas escaped, so pronounced a distended colon. Opening in colon closed without drainage. Patient rallied well from operation. Stitches removed nine days after operation. Discharged September 20, 1893. In excellent health six months after operation.

CASE 99. Miss M. S., diagnosis of ovarian cyst; father killed; mother died of some form of heart trouble; one sister died of phthisis. No family history of cancer. Menstruated at fourteen; always regular. In 1878 noticed enlargement of abdomen, supposed to be due to dropsy; not attended by pain; enlarging very slowly until 1892, after which time it grew more rapidly; did not know which side enlargement appeared first. Coeliotomy, September 8, 1893; no adhesions; both ovaries removed; incision closed without drainage; wound healed without any unpleasant symptoms. Patient returned to her home feeling exceedingly well.

CASE 100. Mrs. E. G. D., father died of disease of liver; mother of cancer of the stomach. Patient healthy until menstruation at sixteen; very painful in region of right ovary; no children; thinks she was once pregnant, not menstruating for one and one-half months; called physician, who gave her something to make her flow; flow very profuse, and thinks since never pregnant. In 1889, severe attacks of pain in region of right ovary; so severe could not bear her feet on the floor. In 1892 again very severe pain in lower part of abdomen; obliged to urinate every five or ten minutes; vaginal douche relieved this, however. February, 1893, dilated for anteversion, after which she improved slowly. July 5, 1893, flowed; from 11th to 30th August flowed slightly every day; August 16 again seized with severe pain in region of right ovary; September 6 flowed naturally. On examination the uterus was found empty, and tumor, large as an orange, present. Ectopic gestation diagnosed by physician, Dr. E. M. Pond, Rutland, Vt., immediate operation being advised. Brought to Albany hospital Saturday night, September 16, 1893. Coeliotomy, September 17, 10 a.m.; right tube contained remains of extra-uterine pregnancy; removed; pyosalpinx left ovary and tube removed; drainage introduced; patient rallied from operation well; glass drainage tube removed, rubber

substituted, on third day; stitches removed ninth day, wound almost entirely healed; uninterrupted recovery, and discharged in good condition twenty-third day. Excellent health since.

CASE 101. Mrs. E. W., family history of tuberculosis on both sides. Patient very delicate. Menstruated at fifteen; very irregular, painful, and scanty, frequently confined to bed for two or three days; no flow for three months previous to operation. Married twelve years; three children; no miscarriages; very difficult labors; pain in region of right ovary eight or nine years; sensation of throbbing, and as though a tumor the size of an egg present. Family physician referred the case to me for removal of tubes and ovaries; diagnosed pelvic peritonitis and pyosalpinx, in which I fully agreed. Cœliotomy, September 21, 1893. Very many adhesions; both ovaries removed; drainage tube removed third day, stitches eighth. Patient did well, and discharged October 25, 1893, in good condition. In excellent health June, 1894.

CASE 102. This illustrates the necessity of the surgeon not allowing the pleadings of the patient to move him in the least in his line of action. Mrs. J. C. D., æt. 28; no children; irregular in menstruation. Saw her with family physician August 15, 1893; menstrual period skipped six weeks previously; severe pain in right side August 13, with some shock and slight hæmorrhage from uterus; patient grew rapidly worse on the 14th; placed in bed, some shock and evidence of internal hæmorrhage during the day; recovered during night, and on morning of the 15th I confirmed her physician's diagnosis of probable extra-uterine pregnancy. Against our better judgment we yielded to her pleadings not to have an operation; she did nicely for three weeks; symptoms returned, and we operated on September 21, removing four months' foetus, with placenta, also many clots from pelvic and abdominal cavity, right tube being implicated. Patient did not rally, and died twelve hours after operation. We should have operated at once upon presentation of symptoms so unmistakable.

CASE 103. Miss G. T., family history good. Diagnosed tubercular peritonitis, possibly ovarian tumor. Patient never strong. Menstruated at thirteen; never regular, and flow scanty. In 1891, caught in the rain while menstruating, and dates illness from that time. Five weeks previous to operation abdomen enlarged rapidly, patient losing some in flesh; bowels and kidneys normal. Cœliotomy, September 22, 1893. Large amount of reddish fluid removed from abdominal cavity, latter thoroughly washed out and glass drainage introduced; stitches removed ninth day; drainage on fifteenth day, when iodoform gauze was substituted. Patient recovered without any unfavorable symptom, and discharged November 15, 1893.

CASE 104. Mrs. M. V., family history of phthisis. Patient always healthy. Diagnosis of ovarian tumor. Menstruated at fourteen; regular; summer of 1892, skipped two months without flowing. Patient *æt.* 52 at time of operation. Since October, 1892, menstruated more or less continuously. June, 1893, first noticed abdominal tumor, although she thought abdomen was getting larger before this. August, 1893, had severe pain, lasting about one week. This especially severe when attempting to work. Could not lie down, but had to be bolstered up in bed. Cœliotomy, September 23, 1893. Large ovarian tumor in right ovary. Seven quarts of fluid removed. Some adhesions. Good recovery; clean, fine wound. Discharged twenty-third day.

CASE 105. Mrs. E. E. Mother died of consumption; otherwise family history good. Patient healthy as a girl. Menstruated at thirteen; regular; menopause seven years previous to operation, at forty-seven years of age. About a year previous to operation, ailing, and during past six months grew larger, but able to walk and lie down comfortably until six weeks ago. Since noticing tumor, bowels constipated ankles never swollen. Diagnosis, multilocular ovarian cyst. Cœliotomy, September 25, 1893. Large multilocular ovarian cyst; tapped and removed with ovary, right side. No drainage. Twenty pints fluid removed. Patient did well, and discharged sixteenth day. Good health, August, 1894.

CASE 106. Mrs. I. A. Family history good. Oldest child nine years of age had it lived. When seven months pregnant, taken sick, and had convulsions, followed by abortion, and child born dead. Youngest child three years and seven months old. Menstruation always regular. In 1889, noticed abdominal enlargement, which steadily increased. Tumor, when first seen, large as hen's egg, and movable when lying down. Cœliotomy, September 28, 1893. Multilocular ovarian tumor. Fourteen quarts fluid, dark, gelatinous, coffee-colored, removed, also tumor, right and left ovaries. Drainage. Patient did well, and discharged twenty-first day with no unfavorable symptoms.

CASE 107. Miss E. E., *æt.* 20. Two years previous to operation suffered much pain in left inguinal region; mental condition not at all good; tendency to melancholia. Spring, 1893, found to be suffering from ischio-rectal abscesses, with fistulous tract; also an opening into the vagina discharging pus. Very severe case of vaginitis, requiring thorough operation. Good recovery, with exception of sinus connecting with vagina. Mental condition such that, later, oophorectomy resorted to. Cœliotomy, October 4, 1893. Left ovary diseased; double pyosalpinx; removal uterine appendages. Patient made a good recovery; some improvement in general condition. Sinus in vaginal wall, left side, healed. June, 1894, not fully improved in mental condition.

CASE 108. Mrs. M. S. Family history fair. Patient well, with exception of attacks of neuralgia, until marriage. Three children born, one alive. Four miscarriages; last, summer of 1892. Very ill during parturition. Menstruated at twelve, and, during pregnancy, after third month up to confinement. Regular since curetted, July 26, 1893. Six weeks previous to operation had peritonitis, keeping her bed almost continuously. In 1891 Dr. Boyd operated, she thinks, for lacerated perinæum. June, 1893, some intestinal obstruction, bowels not moving for three weeks. Cœliotomy, October 7, 1893. Both ovaries and tubes removed; latter adherent, and right one cystic. Right tube in a condition of pyosalpinx. Patient convalesced nicely, although drainage was necessarily kept in lower end of incision for over four weeks, owing to abscess that formed at that point. Discharged November 30, 1893. Good recovery. Patient obliged to go to work at once. September, 1894, presented with threatened hernia.

CASE 110. Mrs. J. M., æt. 40; married; two children. Suffered from severe attacks of pelvic peritonitis, with suppuration; confined to bed several months at a time. An invalid more or less during past five years. Cœliotomy, October 12, 1893. Case of double pyosalpinx, with atrophy of ovary, left side; right enlarged. Quite a number of adhesions. Removal of uterine appendages. Patient made a quick and good recovery. Discharged from private hospital, November 8, 1893.

CASE 111. Mrs. I. De L. Mother died of heart disease and phthisis; otherwise family history good. Patient healthy as a girl. Menstruated at fourteen, never regular, and attended with pain. At twenty fell down stairs, hurting back. Three days after large passage of blood from rectum. Ill for three weeks, and never strong after. In 1883 chair pulled from under her, and worse since. Married twenty-three years, no children, no miscarriages. After last accident noticed tumor, supposed to be connected with uterus. First observed when using syringe taking vaginal douche. Under treatment tumor disappeared for three years. September, 1892, reappeared, attended with very severe pain. Cœliotomy, October 15, 1893. Diseased ovary left side; double pyosalpinx. Removal uterine appendages. Recovery; discharged November 18, 1893. June, 1894, doing very well.

CASE 112. Mrs. H. M., æt. 36. Family history, cancer and tuberculosis. Confined to bed at sixteen with bowel complaint for some time. In 1891 began to flow more than usual, told she was pregnant, but passed term of confinement, when Dr. Rossman, of Ancram, N.Y., told her she had an ovarian tumor, which did not enlarge rapidly. October, 1892, came to hospital, by advice of physician, remaining for a short time. Distinct fluctuation on right side of abdomen, from pelvic region up.

Owing to her feeble condition I did not operate, but drew off about two quarts of fluid. Repeated two or three times during following year; patient gradually improved, and grew stronger, although flow irregular. Diagnosis, double ovarian cyst, possibly associated with a fibroid. Cœliotomy, October 21, 1893. Double multilocular ovarian cyst; fibroid size of cocoanut, connected with fundus of uterus; interstitial. Uterine artery secured; broad ligament tied in sections. No clamp; few adhesions. Operation, one hour and fifty minutes. Fourteenth day lower end wound opened, and quite a portion of pedicle, with two silk ligatures, came away. Some discharge of pus for ten days. Sinus packed. Recovered and discharged on twenty-seventh day. Doing nicely March, 1894.

CASE 114. Miss M. N., æt. 31, family history good. Menstruation very irregular. In 1893 noticed growth in left side of abdomen. Diagnosis of multilocular ovarian cyst. Symptoms increased, and cœliotomy done October 30, 1893. Double ovarian cyst, multilocular. One contained about ten pints of fluid, the other not so much. Large fibroid of uterus; removed by supravaginal hysterectomy; Tait clamp. Good recovery; discharged December 23, 1893. Patient came under observation December, 1894, with sarcoma of the pelvis, and implicating sigmoid flexure. No operation possible.

CASE 115. Mrs. N. C. P. Family history fairly good. Patient always healthy as a girl. Menstruated at thirteen; never regular, but painless. Married three years. One child, fourteen months old. No miscarriages. Menstruated when child was six weeks old, then flow ceased, reappearing April, 1893. Never noticed enlargement of abdomen herself, but physician told her she had some trouble. Thought at first she was pregnant. Never in pain, and in good health all summer. Cœliotomy, November 2, 1893. Small ovarian cyst, left side; tapped with aspirator. Both ovaries removed; right cirrhotic. Recovery. Discharged nineteenth day. In good health June, 1894.

CASE 116. Mrs. S. H., æt. 26. History of two years' illness; well-marked attacks of pelvic peritonitis, pelvic abscess, cystitis, pus in urine, evidence of pyelitis in left kidney, accompanied with vomiting. In New York hospital for several months. Saw her in September, 1893, but she was so feeble and emaciated I did not feel an operation could possibly be done. Under treatment she improved, and cœliotomy done November 2, 1893. Double pyosalpinx, previously diagnosed. This confirmed and appendages removed. Patient recovered at end of second week, when obstruction of bowels presented, partially relieved at times, but she died from exhaustion November 29, 1893. No autopsy. I believe that here was a case of obstruction due to adhesions between the small intestines and the surface of pedicle, possibly peritonitis only.

(To be continued.)

Selected Articles.

THE DIETETIC TREATMENT OF CHRONIC BRIGHT'S DISEASE.*

BY W. HALE WHITE, M.D., F.R.C.P.,

Physician to and Lecturer on Pharmacology and Therapeutics at Guy's Hospital.

THERE are probably few who would be inclined to dispute the statement that the dietetic treatment of chronic Bright's disease is a very important subject, and its importance has been enhanced of late years by the statements so often made that the ideal food for the sufferers from it is milk. In fact, some patients are taught to believe that any other food is poison, and are condemned to nothing but milk for years. I should weary you and occupy you the whole evening were I to quote authorities in support of the doctrine that milk is the best diet for chronic Bright's disease. Merely to mention one. At the tenth International Congress, held at Berlin in 1890, Lépine, in introducing the subject, said he thought that milk was the ideal diet, for, according to him, it replaces the albumin that the patient loses, all its nitrogen is absorbed and used, it does not irritate the kidneys, it is diuretic, and aids the elimination of toxines.

Now, for the past few years, I have been carefully examining the claims of milk as a perfect diet in chronic Bright's disease. Those who recommend it claim that it will do good for the following reasons :

(1) It is said to diminish the amount of albumin. This certainly is not by any means always true, and I have seen many cases showing the falsity of the statement ; for instance, one of my patients passed 8.6 grains of albumin a day upon milk diet, against 9 grains a day on hospital full diet, with sometimes chop and egg added. That is to say, the amount of albumin was virtually the same on both occasions. Another case passed 24.3 grains of albumin a day on milk diet, against 17.8 grains on farinaceous diet, and 23.8 grains on farinaceous with chicken. And I might

*A paper read at Croydon before the South-Eastern Branch of the British Medical Association.

quote other instances. Since I concluded for myself that milk does not always diminish albuminuria, and taught it in the wards, it has been very satisfactory to find others coming to the same view. For instance, Messrs. Ajello and Solaro, two Italian authors, have just published a paper in which they state that in half their patients the administration of milk actually increased the albuminuria, and in some of Grainger Stewart's cases the albumin was much the same on milk as any other diet.

Then we have to remember that if milk did decrease the albuminuria we have no proof that this is of any benefit to the patient. Patients who are very ill with chronic interstitial nephritis may lose only a few grains of albumin a day in the urine. This cannot, of itself, be of much importance, the absorption from the intestine of a very little more albuminous material would, if not lost in some excretion, quickly make up the deficiency. Then, again, people with cyclic albuminuria are often none the worse for it, nor does the loss of albumin in other ways, as by epistaxis or by means of a discharge of pus, produce any symptoms comparable to those of Bright's disease. Indeed, the majority of persons who pass albumin in their urine have not got Bright's disease at all, but are suffering from heart disease, pyuria, specific fevers, etc. Lastly, albuminuria is probably, to a large extent, only a local sign indicating disease of the renal epithelium, and not a general blood condition, and it is from this that danger threatens in Bright's disease. All these considerations indicate that even in a case of Bright's disease, in which the loss of albumin is considerable, this of itself is not really quite so important as is usually thought. Surely if it were, restricting the diet to food containing less albumin than ordinary ought to be harmful to the patient, for not only would he be losing more albumin than in health, but he would be taking in less.

Then, too, we have to bear in mind that even in those cases of chronic Bright's disease in which the change from a milk to a meat diet increases the albuminuria, unless this increase is considerable, it is not so great as is the increased intake of albumin, due to the fact that the meat diet contains more albumin than milk, so that is quite possible for a patient, whose albuminuria is increased by a meat diet, nevertheless to save his body more albumen than he would on a milk diet. The two following cases illustrate this. In one, the change from a milk diet to a full diet led to a daily increase of albumin in the urine of 81 grains. In another the same change caused an increase of 202 grains a day. Now, the hospital milk diet contains three pints of milk, that is to say, 1,076 grains of proteid, the hospital full diet consists of bread 12 oz., meat 60 oz., milk 1 pint, rice pudding $\frac{1}{2}$ lb.; the total proteid in all this is 1,522 grains, so that on a full diet these patients, in whom the change led to an increased daily

excretion of albumin of 81 and 202 grains respectively, were taking in 446 grains more proteid a day on full diet than on milk, so, provided that absorption was equally active in both instances, they actually gained albumin on the full diet in spite of the increased albuminuria.

To sum up, we may say (1) that the amount of albuminuria in chronic Bright's disease is of itself unimportant; (2) that it is often more upon a milk diet than upon others; (3) than even if it is more upon meat than upon milk, nevertheless the increase is usually more than compensated for by the increased intake of albumin.

The next point most frequently urged in favor of a milk diet is that it is easily digestible. My own experience is that often this is directly contrary to fact. I have many a time noticed that patients suffering from chronic Bright's disease who are fed solely upon milk suffer from indigestion, and some, indeed, soon get to positively loathe the milk; which has this further disadvantage, that by its mere bulk it tends to dilate the stomach, and also that it causes constipation. I notice that many writers who, on other grounds, urge milk, agree with me in stating that it frequently causes these disagreeable symptoms.

Then, also, it is often stated that milk is diuretic. I have observed this fact about it, but I have also frequently met with cases in which it is not diuretic, and even in those patients with whom it is the diuresis is often very slight, and not more than the large amount of fluid drunk will explain. And we must remember that many cases of chronic Bright's disease hardly require diuretics, and further, if the patient does at first sight require them, it is always an open question whether it is wise to get rid of fluid by stimulating the kidneys, for it is just those cases in which the inflammatory process is least chronic in which the œdema is greatest, and consequently diuretics seem most called for, but as a general rule it is held to be wiser to rest rather than to stimulate inflamed organs.

The contentions that milk is less irritating to the kidneys than ordinary diet, and that it contains fewer toxins, come entirely from the study and not from the bedside, and there is not a shadow of proof of either of them. Surely, if they were true, all of us who every day of our lives eat ordinary food ought to be in a bad way.

I hope I have convinced you, as I have convinced myself, that none of the reasons that have been urged in favor of giving milk in chronic Bright's disease are valid, and, if so, we will pass on to consider: (1) The effect of different diets upon the excretion of urea and uræmia; (2) the effect on the general health of the patient; (3) on the circulation; (4) any exceptional cases for which milk is suitable, and then we will formulate some general conclusions.

(1) With regard to the excretions of urea, in two of my series of cases more urea was passed upon milk than upon other diets, but both these

cases were going down hill, and as the milk happened to be first tried it is quite possible that the diminution in the excretion of urea simply meant that the patient was nearing his end. In one other case the urea was 133 grains a day less on milk than on farinaceous, and 152 less on milk than on full; among the others who took milk the diet made very little difference on the excretion of urea. Seven patients tried farinaceous diet; one of these also had milk, and 133 grains a day more urea were, as already mentioned, passed upon farinaceous diet than on milk. Five of the seven cases had full diet, in three 96, 19, and 89 grains a day respectively less urea were passed upon farinaceous than upon full diet, and in two cases 25 and 62 grains a day more urea were passed upon farinaceous than upon full. We thus see that with both farinaceous and full diets there is no certain influence upon the excretion of urea. In some of the seven cases a trial was made of adding fish or chicken to a farinaceous diet. One of these passed 212 grains a day of urea on farinaceous diet, against 376 grains a day on farinaceous with fish and two eggs, and 235 grains a day on farinaceous with fish, eggs, and chop. This case shows very well the uncertainty in the excretion of urea produced by adding proteids to a farinaceous diet, and Case No. 4 in my series shows this even more strikingly, for sometimes the addition was associated with an increase and sometimes a diminution in the excretion of urea. Cases 3, 5, and 8 passed more urea when proteids were added to farinaceous diet than they did on farinaceous diet only. We may, I think, therefore say generally, although not constantly, the addition of proteids to farinaceous diet increases the excretion of urea. Six cases had full diet and two of these six had milk, and actually less urea was passed upon full diet than upon milk. The remaining four had farinaceous as well as full diet, and in two the larger amount of urea was passed upon full diet, but two passed less upon full diet than upon farinaceous.

It seems to me, therefore, that we must conclude that the effect of diet upon the excretion of urea in patients suffering from chronic Bright's disease is most uncertain, for it by no means follows—in fact, the reverse is often true—that more proteid in the food means more urea excreted.

As, however, it is now known that uræmia does not depend upon a retention of urea in the body, all this is of little importance compared to the question of the influence of diet upon uræmia. Ten patients, in whom various diets were tried, were watched very carefully. They were all in the hospital; four died, the first from bronchitis, due to fog; the second from cardiac failure, both aortic and mitral valves being diseased; the third had much bronchitis and some pneumonia; and the fourth went steadily down hill, but, curiously, during the greater part of the only period in which he mended a little he was taking full diet. We see,

therefore, that there is no evidence from these cases that a fatal result is brought about by a full diet, or by the addition of meat to a farinaceous diet. Nor do these diets induce uræmia or weaken the patient. My fifth case was very striking in this respect, for, although he had been taking farinaceous diet for nearly four weeks, he developed severe uræmia ; the very day the symptoms of this began to abate he was put upon full diet, but they never returned, and he left the hospital greatly relieved. I feel quite sure, and I know from what I have heard that others agree with me, that a milk diet is much more liable to induce uræmia than an ordinary everyday diet, and that, consequently, those who are constantly showing slight uræmic symptoms should partake of the usual food of healthy people.

(2) The next point we have to consider is the effect of diet on the general health of the patient. I have watched my cases closely, and have noticed that patients always feel better on ordinary diet than upon milk ; even if they are on farinaceous diet their health is improved if meat is added to it. A common thing is for the patient, while on a milk diet, to feel languid and disinclined for any exertion ; he likes to stop in bed ; but, alter his diet, and in a few days he is bright and cheerful, desirous of getting up and enjoying his life. Frequently patients beg and implore for some meat, and my experience is that milk or farinaceous diet is most unpopular in chronic Bright's disease. I have often seen, among those patients who have nothing but milk, an absolute loathing of it such as is rarely met with in other maladies. As I have already mentioned, many authors have called attention to this fact. It would be out of place, this afternoon, to give you a long list of quotations, but, merely to take the latest author, Vergely ("Observations sur le régime lacté absolu dans l'albuminurie," Bordeaux, 1893), we find him saying that he most strongly protests against milk in chronic Bright's disease, for it leads to weakness, and causes digestive troubles that prevent all further treatment ; that it is a frequent cause of the anæmia met with in patients suffering from chronic Bright's disease ; and that it leads to a diminution of weight. With every word of this I agree. Even if the case is obviously going to die, the end is postponed and the patient's last days are made more cheerful by feeding him with ordinary food rather than constantly milk, milk, milk, and nothing but milk.

(3) You will remember that the next heading we proposed to consider was the effect of various diets upon the circulation. Here the satisfactory, but, in medicine, unusual result is seen that clinical experience agrees with *a priori* considerations. When a patient is weak from any disease, beef-tea is a favorite remedy, and an excellent one, too ; but it contains very little nourishment ; almost all the proteids and fats of the beef remain in the meat, and good beef-tea is little more than a watery solution of the

extractives of meat, which are much more abundant in beef than in mutton, fowl, or fish, although they are present, to some extent, in all meat. What I have just said about beef-tea is true of most of the various extracts which are sold. Now, what is the action of the extractives contained in these extracts? They are powerful cardiac stimulants, acting directly on the muscle of the heart. This has been shown by Mayo, who, by applying beef-tea to the isolated frog's heart, has greatly increased its contractile power; and we all know how, in conditions of great exhaustion, beef-tea, or Valentine's extract, improves the pulse. But I may, in passing, urge what I feel sure is true, that many persons are poisoned by over-doses of these powerful preparations, just the same as I feel sure I have seen the end accelerated by over-dosage of brandy. Any substance which stimulates the heart in moderate doses stops it in large doses. This is a well-known fact with digitalis and with alcohol, and most of us, consequently, give digitalis with caution; but sometimes we hear of cases of which it is said: "I am getting in all the nourishment I can—two tins of Brand's essence a day, besides some beef-tea and brandy," all of which means little or no food, but toxic doses of powerful cardiac stimulants. I cannot help thinking that sometimes we see cases as much done to death by an abuse of our excellent remedies, beef-tea, Valentine, Liebig, and Brand, just as, forty or fifty years ago, patients were killed by the over-zealous use of that excellent remedy, mercury.

However, to return to Bright's disease. From what has been said, it is clear that we should expect a full ordinary diet, containing meat, to act as a cardiac stimulant, and that is exactly what it does. I know nothing more striking than to notice the alteration which takes place when a patient with chronic Bright's disease who has a feeble circulation from cardiac failure, bronchitis, or some other cause, and has been for some time upon milk, is put upon ordinary diet; the pulse becomes fuller, the circulation improves, and the œdema may even diminish. There can, I think, be no doubt whatever that in cases of chronic Bright's disease with a feeble circulation ordinary diet containing meat is an excellent thing, and that the good that is done is due largely to the cardiac stimulant action of the extractives in the meat. For the same reason this is just the class of cases in which a little alcohol is beneficial, for it not only aids the circulation, but improves the digestion.

(4) The consideration of the cases for which a full diet is undesirable naturally follows upon what we have just said, and it follows that a diet composed largely of meat must be given with caution to those patients with chronic Bright's disease in whom the pulse tension is high and the hypertrophied heart is acting powerfully and strongly, for in such cases the chief danger lies not in uræmia, but in hæmorrhage, especially cerebral.

The extractives in the meat, acting as powerful cardiac stimulants, will increase the force of the heart, raise the blood pressure, and greatly add to the liability to cerebral hæmorrhage. In expressing this opinion I am supported by that of Dr. Ralfe, and also by the fact that cerebral hæmorrhage is particularly prone to occur after a full meal. But while in these cases large meat meals should undoubtedly be avoided, we ought not, unless the pulse tension is very high, at once to fly to the other extreme and give nothing but milk, for it must be remembered that the high-tension pulse is in itself probably some evidence of a uræmic condition, which, we have seen, is rather accelerated by milk. For most of such patients it will suffice if we never allow large meals, but order each to be small, but tell the patient to have one or two more in the day than is usual, and also we should advise him to take fish and fowl rather than beef and mutton. Something like this, say. A little fish or bacon with a little toast and tea for breakfast, a sandwich or two at 11 a.m., a few oysters for lunch, with some bread and butter. Afternoon tea. For dinner, chicken with vegetables, bread, and a sweet; and a glass of milk the last thing at night, peptonized if his digestion requires it. Because alcohol has much the same effect on the circulation as meat, the patient should avoid it altogether if the pulse tension is high, for although, no doubt, it to some extent dilates the vessels, and so far tends to diminish blood pressure, yet, on the other hand, by its action as a cardiac stimulant it tends to increase it.

An ordinary diet should be avoided when the patient is the subject of acute Bright's disease. The ætiology of this disease is a subject which time forbids our discussing now, but I think I could convince you that probably some day it will be shown to be a specific fever. We know that one variety of it, namely, the scarlatinal, is part of a specific fever, and the other variety is in its sudden onset, its pyrexia, the close resemblance of the pathological changes in the kidney to those in the lung in pneumonia, and in many other points, very like a specific fever; and just as we have learnt that pneumonia is a specific fever, so some day, perhaps, we shall discover that acute Bright's disease is a specific fever, and we know that febrile processes do best on a slop diet. Therefore, when patients are suffering from acute Bright's disease, I usually prescribe milk or a farinaceous diet.

This short paper, gentlemen, includes the chief points I wanted to lay before you. I have stated them briefly because I am anxious that you should give me the benefit of your experience, and tell me whether it corresponds with mine.—*Quarterly Medical Journal* (England).

Clinical Notes.

A CASE OF TETANUS.*

By W. B. THISTLE, M.D.,

TORONTO.

THE following history of a case of tetanus may be of interest, simply on account of the rarity of the disease. Apart from that, I am sorry to say that, owing to circumstances over which we have no control, there is nothing new to report in the way of treatment of this dreadful affection.

Parker F—, æt. 8 years, admitted to hospital October 31. Illness began October 26, when he complained at tea time that the bread was too thick, and that he had difficulty in opening his jaws. On attempting to open the mouth widely there was tonic contraction of the muscles of the jaw. That night sleep was restless and starting. He complained of pain in stomach and between the shoulders. Pain much increased on attempting to move. October 27, he was much better, but had painful muscular contractions. October 28, about the same, but spasms were more prolonged and painful. October 30, called in Dr. Wilson, to whom I am indebted for the notes prior to coming into the hospital. Temperature, 100°; pulse, 120; respiration, 24. On attempting examination, severe spasm of the entire muscular system was excited. Complete opisthotonos and trismus. During spasm he could not separate jaws to the slightest degree. October 31, seen with Dr. Wilson, and found the condition about as described, except that spasm was not so severe, owing to the fact that chlorine had been given. The boy was quite bright, and, when quiet, did not suffer much. During examination a small black puncture was found in the centre of the right heel. No appearance of pus, but tissue about the perforation for a very short distance was black and dry. The mother gave the following history of the heel puncture: On the 12th of October he complained that his boot hurt him, and, on examination, a

* Read before Toronto Clinical Society.

punctured wound was found in the centre of the heel, caused by a projecting nail in the heel of his boot. The nail stood up three-eighths of an inch. Next day the wound was red and tender. It was poulticed, and the mother probed it with a needle, but no pus was found. It healed up in a day or two, and there was nothing further until spasm came on on the 26th, as described.

October 31, admitted to Victoria Hospital, in my care. This was done, partly to have quiet and good nursing, and largely because at that time we entertained the idea of procuring the tetanus antitoxin, in which case it would be necessary to have the patient under constant observation. Unfortunately, we were doomed to disappointment. We communicated with the Pasteur Institute, New York; Johns Hopkins, Baltimore; McGill, Montreal; Philadelphia, Boston, but failed to secure the desired antitoxin. There was not a particle to be obtained, so far as we could find out, on the American continent. Failing in this, there was nothing for it but palliative treatment. He was given chlorine and oromide in full doses, and kept quiet in bed. The wound although healed and showing no sign, was excised.

October 31. Temperature, $98\frac{4}{5}^{\circ}$; pulse, 122; respiration, 28; sleeps most of the time; has had several convulsive seizures. Takes milk without much difficulty, and in large quantities. Spasm not sufficient to produce opisthotonos. Muscles remain rigid during intervals.

November 1. Temperature, $99\frac{4}{5}^{\circ}$; pulse, 126; respiration, 32. During day had some twenty spasms, varying from one to twenty minutes in length. Sleeping in intervals. Takes milk freely. Given one-eighth grain morphia to produce sleep; thirty-four ounces of milk taken.

November 2. Temperature, $100\frac{2}{5}^{\circ}$; pulse, 116; respiration, 42. Spasms during the day quite frequently, but for most part they are light. Face is flushed, and during sleep he mutters, sings, or cries out; urine per catheter; control spasm by chloroform.

November 3. Temperature, $102\frac{2}{5}^{\circ}$; pulse, 146; respiration, 48. Slightly delirious; breathing labored. Spasms not very frequent, but severe when they did occur. Muscles at times become quite flaccid. 9 a.m., temperature, $105\frac{2}{5}^{\circ}$; pulse, 180; respiration, 46. Given cold pack. Strychnine sulphate hypodermically. Cries out at times, but spasms are rare and very slight. 4 p.m., temperature, $104\frac{2}{5}^{\circ}$. 6 p.m., temperature, $104\frac{2}{5}^{\circ}$; pulse, 160; faint respiration, 38. Packs given. Spasms about gone; patient unconscious. Not able to swallow all day; cannot retain enemata. Bowels acted upon freely with ol. crotonis; stimulants given hypodermically. Nothing abnormal in urine. Died comatose.

Remarks. It was most unfortunate that no antitoxin could be procured. This was the more surprising because of the frequency of reported

cases recovered under its use in British and continental journals during the last year. Representation should, I think, be made to the Provincial Board of Health to not only keep on hand a supply of diphtheritic, but also tetanus antitoxin. The tetanus bacillus is apparently as ubiquitous as any of its fellows, and who can say when the surroundings and nature of a wound may be such as to shut off oxygen both from within and without, and thus convert a harmless fungus into the extremely virulent poison whose results we see in the symptoms which go to make up the clinical picture of tetanus?

Bearing in mind, too, the fact that the tetanus bacillus does not become virulent unless excluded from oxygen, one sees the necessity, in the case of punctured wounds, of opening them up freely, and of thoroughly cleansing them so that oxygen from without may enter freely, and that inflammatory action in the surrounding tissue may not limit the supply of oxygen derived from the blood.

Progress of Medicine.

MEDICINE

IN CHARGE OF

J. E. GRAHAM, M.D., M.R.C.P. Lond.,

Professor of Medicine and Clinical Medicine, University of Toronto; Physician to the
Toronto General Hospital, and St. Michael's Hospital;

AND

W. P. CAVEN, M.B. Tor.,

Lecturer in Clinical Medicine in the University of Toronto; Physician to
Home for Incurables.

SUMMARY OF RECENT LITERATURE ON SERUM TREATMENT.

I. STATISTICS.

The most comprehensive statistics are published by Straus and Roux, 448 cases being reported. They were analyzed carefully in a paper by Martin and Chaillou in the *Annales de l'Institut Pasteur* (see *Medical Chronicle*, p. 275). In the 448 cases the mortality was 24.5 per cent., the average mortality of the three preceding years being 51.71 per cent., a proof that this diminished number depends on a specific action of the drug, and is not due to the mildness of the disease, the authors see in the results at the Hôpital Trousseau during the same time, the mortality there being 60 per cent.

Kossel, who has collected with Ehrlich and Wasserman the statistics of the Koch Institute and some other Berlin hospitals, records, in 233 cases, a mortality of 12.1 per cent.; the cases are not classed according to their severity, but the day of their disease, 1 death occurring in 58 cases in the three first days of the disease. In later days of the disease 23 recovered out of 34, the cases being "very severe"; in 30 cases of larynx, 19 recovered, 12 without operation. The sooner that treatment is commenced the better the result.

Katz's statistics comprise 151 cases, with a mortality of 17.2, the previous average being 37 per cent. According to the most recent communication of Virchow to the Berlin Medical Society, the mortality in 303 cases treated was 13.2 per cent. In 230 cases not treated, for want of material, the mortality was 47.82 per cent.

Koerte, whose statements are very definite and numbers well arranged, reports 132 cases. The mortality was 33.1 per cent. ; formerly 45.1 per cent. The treatment was interrupted for a period, the supply of serum failing ; the mortality rose to 53.8 per cent. Tracheotomy was performed in 42 cases treated. Of these 52.4 per cent. died ; previous average, 77.5 per cent. ; of 108 children under two years old tracheotomied before the new treatment was commenced, 10 recovered ; of 8 cases since the serum treatment was introduced, 3 recovered. Eight cases died, although the treatment was commenced in the three first days of the disease.

v. Ranke records a mortality of 49.2 per cent. for the last few years in the children's hospital in Munich. He has injected 9 cases, and lost 3 ; more recently, 10 cases, 1 dying. Aub observes that the average mortality in Munich is between 8 and 13.8 per cent., and Emmerich explains that in the hospital in question a large number of the cases are complicated with streptococcus, subsequent treatment being consequently scarcely to be expected.

Bürger records 30 cases, with 28 recoveries. Of 5 tracheotomies 1 died ; the average mortality for the last year was 14.5 per cent.

Hilbert reports 11 cases without a death. Sigel reports (*Würt arztl. Corrb.* 13) 12 cases, 9 cases having tracheotomy necessary.

II. COURSE OF THE DISEASE UNDER THE INFLUENCE OF THE SERUM.

Kossel reports end of fever within 24 hours by crisis and quiet subsidence of the local trouble ; Straus reports "rapidement les fausses membranes se détachent et cessent de se reproduire. La température s'abaisse promptement, et la defervescence s'effectue ordinairement dès le lendemain de l'injection." Schmidt reports rapid improvement of the general condition and local symptoms, and was particularly struck with the vivifying action. Sigel describes this action as being wonderful.

Katz has not seen any special action on the general condition, the membranes or the glandular swelling ; he points out that the membrane did not extend to the larynx in the cases injected ; he observed often remarkably quick defervescence. Bürger reports subsidence of local symptoms, and improvement of the general condition, but in his cases defervescence occurred in two to four days ; in v. Ranke's cases some ended by crisis, some by lysis ; the separation of the membrane took several days. Koerte reports a great improvement in the general condition, but saw little action on the fever or local symptoms. Hilbert reports that the cure occurred in a perfectly normal manner.

III. BY-ACTION AND DELETERIOUS ACTION OF THE SERUM.

Lubinski reports in a two-year-old child, which recovered under serum treatment, a week after, swelling and redness of both ankles. On the

following day a rash like measles, pain in the knee, elbow, and foot ; temperature, 104° F. Complete recovery.

Similar cases are reported by various observers. Scholz reports the case of a boy, æt. 10 years ; ten days after infection urticaria-like rash on hand and foot, and pains in almost all the joints ; no rise in temperature ; similar symptoms in a girl æt. 4 years. Mendel reports hæmorrhages, in one case severe epistaxis. In Cynrim's two cases there was erythema, with pains in the joints, parasthesia, and general indisposition. With respect to albuminuria some authors state that it is diminished, others that it is not prevented (Börger) ; some have observed severe albuminuria without stating that they consider it due to the serum. Oertel (*Munchener med. Wochenschrift*, No. 48) says that it is an unusual sequel. Straus has seen abscess at the site injected three times. Post-diphtheritic paralysis is said to occur after treatment by the serum (Katz). Kossel believes this is only in cases treated late, or in very severe cases. By far the largest number of observers have no ill-effects to record (Koerte, v. Ranke Hilbert, and others).

IV. THE PROPHYLACTIC ACTION.

Behring states that about 10 in 10,000 protected cases acquire the disease. According to Hilbert about 20 per cent. of the persons exposed to contagion acquire the disease ; he injected 64 as a prophylactic, and, although they were exposed to the disease, only 6.7 acquired it, and the cases were very mild. Seitz made 8 prophylactic injections, and none of the cases became infected. Scholz records two cases which became infected despite the injection. Kossel records three cases of recurrence of the disease in cases treated. The views as to the length of time the protection lasts are very variable, statements being from 8-14 days to 6 weeks (Behring).—L. Larmuth, in *Medical Chronicle*.

THERAPEUTICS

IN CHARGE OF

GRAHAM CHAMBERS, B.A., M.B. Tor.,

Professor of Analytical Chemistry and Toxicology, Ontario College of Pharmacy; Lecturer
in Organic Chemistry and Toxicology, Woman's Medical College;

AND

WILLIAM LEHMANN, M.B. Tor.,

Physician to the Home for Incurables and House of Providence.

TREATMENT OF MORPHINE AND OPIUM POISONING BY REPEATEDLY WASHING OUT THE STOMACH AT SHORT INTERVALS.

Hamburger (Johns Hopkins Hospital *Bulletin*) gives a report of a case successfully treated by this method. The patient was a Chinaman who had taken a very large dose of opium with the intention of committing suicide. The principle of the treatment is based upon the fact that morphine is excreted into the stomach, and, therefore, its frequent removal from the latter organ would assist in its elimination from the system.

[As morphine is completely decomposed by potassium permanganate, we are of the opinion that, in place of washing out the stomach, small doses of potassium permanganate, frequently given, would be preferable. —G.C.]

SODIUM BICARBONATE IN THE TREATMENT OF DISEASES OF THE STOMACH.

M. Dujardin-Beaumetz publishes a paper on this subject, in which he gives the results of his labors, as well as those of a number of other experimenters. The following are the principal conclusions:

- (1) Sodium bicarbonate excites gastric secretion.
- (2) When the dose is small, the increase of acidity is slight and variable.
- (3) When it is a medium dose, the increase of hydrochloric acid is considerable.
- (4) When the dose is large, the period of excitation is prematurely arrested.

(5) The excess of hydrochloric acid varies according to the doses, reaching its maximum with small doses in two hours, with medium doses in three hours, and with large doses in four hours.

(6) The bicarbonate should always be given an hour before eating.

(7) At the beginning of a meal the administration of the bicarbonate appears to suspend the secretion of pepsin. After the meal the exciting action becomes attenuated.

(8) In chemical dyspepsia, in cases of hypochlorhydria, the dose must be given an hour or half an hour before eating, and in hyperchlorhydria during the meal or from three to four hours afterwards.

(9) In muscular dyspepsia, when there is a tendency to stasis or to dilatation of the stomach, the dose should be given during the meal or an hour afterwards.

(10) That the best alkaline waters to be employed in the treatment of diseases of the stomach are those containing sodium bicarbonate.

COCAINE IN CHLOROFORM NARCOSIS.

Rosenberg, at a recent meeting of the Berlin Medical Society, advised the anæsthetizing of the mucous membrane of the nose with a spray of cocaine solution before the administration of chloroform. By this means anæsthesia is more readily induced, and reflex action on the heart is prevented. Cocaine is an antidote to chloroform, and, therefore, its absorption would probably lessen the danger of the latter.

OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

Professor of Obstetrics in the University of Toronto; Obstetrician to
the Toronto General Hospital.

ASSISTED BY

H. CRAWFORD SCADDING, M.D.,

Physician to Victoria Hospital for Sick Children.

BACTERICIDAL PROPERTIES IN THE VAGINAL SECRETION OF PREGNANCY.

B. Kroenig (*Deutsch med. Wochens.*, No. 43, 1894) claims to have demonstrated that not only is the vaginal secretion in normal pregnancy free from pathological germs, but that it has a distinct germicidal power. Experiments were made in a great number of pregnant women by introducing into the vagina at a considerable period before labor different kinds of germs, and then at stated intervals withdrawing secretion for examination, taking it both from the vaginal entrance and from the fundus vaginæ. The bactericidal power of the vagina was first shown in the case of the innocuous pyocyaneus. Soon the lowest and then the highest part of the vagina were found clear. Further experiments were made with staphylococcus and streptococcus, and it was found that the secretion was equally active whether the vagina contained the "normal secretion" or the so-called pathological secretion described by Doederlein. But Kroenig rejects Doederlein's view that the vaginal secretion described by him as pathological is really so. In these experiments the streptococcus was killed first, the staphylococcus and the pyocyaneus needing almost twice as much time. The vagina was found clear in two days at longest. He further shows that syringing the vagina with antiseptic solutions has the effect of reducing or completely destroying its germicidal powers. Syringing with simple water only slightly weakened them. Hence Kroenig concludes that prophylactic syringing should be given up. It does no good, and much harm. Even in pregnancy with gonorrhœal infection it is best omitted. At the Leipzig clinic they consider that they get better results by the abandonment of syringing than by its adoption; and Kroenig advises that disinfection of the internal genital passages should be abandoned as part of the routine of antiseptic midwifery.—*British Medical Journal*.

ETIOLOGY OF PUERPERAL SEPSIS.

Dr. J. Whitridge Williams, of Baltimore, in discussing puerperal infection before the Obstetrical Society of Philadelphia (*American Gynecological and Obstetrical Journal*), claimed that puerperal sepsis is due to a number of micro-organisms, the most frequent causal organism being the streptococcus pyogenes. Cases infected with staphylococcus aureus are comparatively rare, and usually of moderate severity. He knows of no fatal case following infection with the gonococcus.

In the management of labor cases he believes in subjective antisepsis. He condemns vaginal douches in general practice. In the hospital practice he believes that the cases should be differentiated from a bacteriological standpoint, and those cases having an abnormal vaginal secretion should be douched.

In regard to the treatment of puerperal fever, if mild, he advises the cleaning out of the uterus and the uterine douche, but is indifferent if bichloride of mercury solution, carbolic acid solution, or simple boiled water be used. The fluid acts mechanically, and enough of the antiseptic to do good cannot be used unless continuous irrigation be resorted to.

In conclusion, he believes in the possibility of auto-infection, and in rigid subjective antisepsis in the management of labor. The vaginal douche is condemned in private practice, but is to be used in those hospital cases where there is diseased vaginal secretion.—*Universal Medical Magazine*.

CAUSATION OF THE SACCULATED PREGNANT UTERUS.

By J. Halliday Croons, M.D. (*Edinburgh Medical Journal*, October, 1894):

Four cases of this rare condition are narrated. In the first case a large pediculated ovarian tumor had a hard projection on its lower edge, which pressed over the brim of the pelvis, deeply indenting and dividing the pregnant uterus into an upper and a lower half. The lower segment contained the head and the upper the trunk and extremities. There were no auscultatory sounds, menstruation had been suppressed for over a year, and no trace of a cervix uteri could be found. A sessile ovarian tumor was diagnosed. The cause producing the sacculated condition was the growth of the projection on the tumor *pari passu* with the development of pregnancy.

In the second case the woman had suffered with a large pelvic abscess, which pointed through the vaginal roof. It was drained, and she recovered. Seven months later, when labor came on, no os could be found until an anæsthetic was given, when the cervix was found very high, fixed, and indurated. The abdomen was opened, and a dead child was extracted. In the second week a peritonitis came on, and the patient

died later of pneumonia. In a somewhat similar case reported by Dr. Reid, of Glasgow, he attributed the displacement to adhesions consequent upon an old pelvic inflammation.

In the third case a large tumor, irregular in shape, nearly filled the abdomen and vagina. No cervix uteri could be found, and no auscultatory sounds, except a very faint souffle, and, as the patient had had irregular hæmorrhages, a sessile ovarian tumor was diagnosed. On opening the abdomen a sacculated pregnant uterus was found. The cause of the sacculatation in this case was a fibroid tumor in the anterior uterine wall, which, by impinging on the brim of the pelvis, had prevented the lower uterine segment from rising. This was gently freed, and four days after the woman was delivered with the greatest ease.

The fourth case simulated a sacculated uterus. A large tumor reached to the umbilicus and filled the vagina. On the left the tumor was hard and nodular, but on the right it was quite soft, and a uterine souffle and foetal heart could be detected. This appeared to be a pregnant uterus with fibroids. Cæsarean section was made and an extra-uterine pregnancy was found.

To differentiate a sacculated uterus from a sessile ovarian tumor is almost impossible if the auscultatory sounds are wanting. The abdominal portion of the uterus is more fixed than usual, and is more or less deflected to one or the other side.—*International Medical Magazine*.

OCCIPITO-POSTERIOR POSITIONS.

Dr. Van Peyma, Buffalo, concludes an article on this subject as follows (*Buffalo Medical and Surgical Journal*, March, 1895):

In conclusion, I wish to emphasize the vital importance of recognizing the position in vertex presentations; to insist that, as a rule, cases of occipito-posterior position should be left for the natural forces to effect delivery—forces which, in the vast majority of cases, are not only entirely adequate, but in these cases will accomplish the object better than the most skilled instrumental or manual interference.

Further, I desire to maintain that flexion is essential to natural rotation; that rotation is frequently delayed until the head is very low; that the character of the pains is a very important factor; that with complete anæsthesia the mobility of the head, even when deep in the excavation, is often quite surprising; that in occipito-posterior position the blades of the forceps must be applied well forward to insure a firm hold; and that, after the head reaches the perinæum, extreme flexion must be maintained until the occiput has passed over the perinæum; and, lastly, that no hard and fast rules can be formulated to cover all cases, but that much must necessarily be left to the judgment of the operator, based on a consideration of all the conditions involved.

GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

EDMUND E. KING, M.D. Tor., L.R.C.P. Lond.,

Surgeon to St. Michael's Hospital; Physician to House of Providence and Home for Incurables; Assistant Pathologist, Toronto General Hospital.

THE ORIGIN OF INFLAMMATIONS IN THE URINARY TRACT.

According to Drs. Posner and Lewin (*Berliner klinisch. Wochenschrift*) most purulent inflammations of the urinary organs are caused by micro-organisms introduced from without, in the majority of cases by means of a catheter. Instances, however, occur of severe cystitis and pyelonephritis where no such mode of infection is possible. The supposition has been hitherto that it might be derived from the intestinal canal, and it has been shown that the bacterium coli plays a considerable part. Experimentally, a superficial injury to the large colon has led to cystitis, pointing to a direct passage of bacteria from the intestine to the bladder. The authors endeavored to solve the question by closing up the anus and at the same time ligaturing the urethra. In all cases micro-organisms were found in the urine, while in stoppage of the urethra alone the secretion remained absolutely sterile. The organism found was almost always the same gas-forming bacillus belonging to the same group as the bacterium coli. The question, then, was whether the bacteria passed directly from the distended rectum into the bladder. The possibility of this occurring was present, as well-marked peritonitis has developed from an intestinal obstruction. Further investigation proved this event to be rare, for they found the bacterium coli not only within the bladder, but in the kidneys as well, while the peritoneal fluid between the bladder and bowel was sterile. Posner and Lewin hold, therefore, that under favorable circumstances intestinal micro-organisms can be taken up by the blood and excreted through the kidneys—a process known to be present in certain infectious diseases. They proved this possibility by injecting cultures of the bacillus prodigiosus into the intestine and finding them in the bile, blood, kidneys, and urine. This would furnish an explanation of auto-infection from the intestinal canal, showing itself, not only as an inflammatory affection of the genito-urinary tract, but also in other parts of the body.—*Medical Record*.

CYLINDROIDS.

The diagnostic value of casts in the urine is undoubted, but we must be very careful of our diagnosis. Dr. Thomas, in the *New York Medical Journal*, was the first to draw attention to bodies that resembled casts, but were not, and had little or no pathological significance. Dr. Purdy, in his recent work on Urinalysis, page 195, refers to them as follows :

In addition to the casts described, the urine sometimes contains the so-called cylindroids of Thomas, who first observed them in the urine in a case of scarlatina. These are long, wavy, ribbon-like structures, which often divide and subdivide at their ends with diminishing diameters. These ends may be folded or twisted in corkscrew form. They are pale, colorless, and of greater length than the ordinary casts described, and rarely, if ever, have attached to them any cellular elements whatever. They appear flat, and do not give the impression, to the eye, of being solid structures like true renal casts. It seems not improbable, however, that these cylindroids come from the renal troubles. They occur in nephritis, cystitis, and renal congestion, and may be present in urine that is free from albumin. They are not characteristic of kidney disease, but probably more often caused by irritation of the lower urinary tract, which has, in a measure, extended to the kidneys.

Lastly, it may be stated that casts are sometimes met with in the urine composed of urinary crystals or granular salts. Only those composed of urates and hæmatoidin have thus far been observed, and they are of little practical significance, being only found in the urine of infants, or in cases of gout, renal congestion, etc.

SCLERODERMA.

A case of this rare disease, reported by J. N. Bloom, M.D., Louisville, appears in *Archives of Pediatrics*, January, 1895. This was the third example of the disease the author had seen and exhibited inside of two years.

The patient was a little girl aged eight years, who was apparently in perfect health, apart from the skin lesion.

A small white patch was noticed on the left shoulder about two years ago. It was painless, and has remained so throughout its course. It has steadily increased to its present size, now measuring about eight inches in length, by three and a half inches in width at its widest point. The skin over the affected area is firmly bound down to the deeper structures, and the parchment-like appearance of the plaque is very marked. The part is white and harsh to the touch, resembling scar-tissue. The author called attention to the engagement of the capillaries at the margin of the plaque.

This he considered pathognomonic. Another appearance readily observed is that immediately at the edge of the plaque, extending all the way around, there is an elevated line fully one-tenth of an inch in thickness.

The author considers the prognosis as to life is not at all grave as to recovery—not so grave as was formerly believed. Many cases do recover, even after ten or fifteen years, and the skin becomes again normal.

TURPENTINE IN INCONTINENCE OF URINE.

The unpleasant smell emitted by persons suffering from incontinence of urine can be conveniently covered, according to Dr. Emminghaus, by means of ten-drop doses of turpentine administered in milk or water three times a day. This converts the smell of stale urine into an odor resembling that of violets, as is well known to persons who have taken turpentine. The remedy is perfectly harmless in most cases, and has been given by Professor Emminghaus for many weeks at a time without any inconvenience. It is, however, contraindicated in ulcer of the stomach, gastric catarrh, and nephritis, and also in some persons in whom turpentine tends to upset the digestive functions.—*London Lancet*, 1894, ii., 992.

FISTULA IN ANO.

In doing a radical operation for fistula the following points, according to Dr. J. H. Bacon, should be observed :

(1) Never sever the sphincters at more than one place at the same operation, no matter what the complications may be, otherwise incontinence is sure to follow.

(2) Unless all the channels are followed up and laid open the operation will fail of its purpose.

(3) Fistula resulting from tubercular abscess must not be operated upon if there is sufficient tissue destruction of lung to produce hectic, fever, sweats, etc., unless the fistula is causing severe painful spasms of the sphincters, then it should be divided at any stage.

(4) After laying the fistula tract open the wound must be made to heal from the bottom, and as the cutaneous or mucous side of the wound is better nourished it will throw out a more healthy granulation, that tends to bridge over and close the slower granular surface at the bottom, thus leaving a fistula remaining.

(5) When the fistulous tract is not too complicated it should be dissected out entire, and the wound brought together, beginning at the bottom with continuous catgut sutures and approximating the surfaces in successive layers until the whole wound is closed.—*Northwest Medical Journal*.

PÆDIATRICS AND ORTHOPÆDICS

IN CHARGE OF

W. B. THISTLE, M.D., L.R.C.P. Lond.,

AND

B. E. McKENZIE, B.A., M.D.,

Lecturer on Orthopædics and on Surgical Anatomy in the Woman's Medical College, and
Surgeon to the Victoria Hospital for Sick Children, Toronto.

THE ANTITOXIN TREATMENT: ITS RESULTS AND ITS DANGERS.

At the meeting of the New York Academy of Medicine, on April 4th, the treatment of diphtheria by antitoxin was more thoroughly discussed than it has yet been in this country. The bacteriological and statistical sides of the subject were presented by Dr. Hermann M. Biggs, the bacteriologist to the Board of Health, who described the methods he adopted to produce antitoxin in this city. The first serum used was obtained from a horse that was in poor condition and was killed; 4 litres of antitoxic serum were obtained from its blood. Before this quantity was used other horses had been inoculated and were producing serum, so that the city had now a plentiful supply. He reported two series of statistics; one of cases treated at the Willard Parker Hospital for Contagious Diseases, the other of cases treated in tenement houses, principally by the Board of Health officials. The following table will show the statistics of the latter class:

Age.	Cases.	Deaths.	Mortality Per Cent.
5 and under	173	33	19.07
Over 5	82	7	8.53
Total	255	40	15.69

In 252 of these patients the larynx alone was affected; in 116, the pharynx and tonsil; in 57, the pharynx and nose; in 41, the larynx and pharynx; and, in 17, the larynx, pharynx, and nose were involved. There

were 50 mild cases, 76 moderately severe cases, 96 severe cases, while the rest had dangerous complications. If the foregoing table were corrected by deducting 15 moribund cases, it would read :

Age.	Cases.	Deaths.	Mortality Per Cent.
5 and under	161	21	13.04
Over 5	79	4	5.06
Total	240	25	10.40

If the results were tabulated by the day of the disease the figures would be :

Day.	Cases.	Deaths.	Mortality Per Cent.
1st.....	30	2	6.66
2nd.....	77	7	9.09
3rd.....	67	11	16.41
4th.....	31	7	22.60
5th and later.....	46	13	28.25

As evidence has shown that only moderate benefit could be obtained from the use of the antitoxin on or after the fifth day of the disease, the results above obtained are striking. If from this table the moribund cases were omitted, the results would be :

Day.	Cases.	Deaths.	Mortality Per Cent.
1st.....	30	2	6.66
2nd.....	74	4	5.04
3rd.....	62	6	9.68
4th.....	27	3	11.11
5th and later.....	—	—	—

The hospital statistics were less favorable ; 129 cases were treated, of which 83 were nasal or pharyngeal diphtheria, and 46 were pharyngeal

alone. A series of cases treated with a low-grade serum were omitted. There were 31 deaths (24 per cent.), while in the corresponding three months in 1894 there were 146 cases treated and 47 deaths. In 16 intubated cases not treated with antitoxin there were 13 deaths (81 per cent.), while in 24 cases treated with the remedy there was a mortality of only 47.3 per cent. The antitoxin had a marked effect in limiting the spread of the false membrane; and while its use might be followed by cutaneous phenomena, and in one or two cases it had seemed to produce general arthritis, these sequelæ were rare.

The clinical side of the question was discussed by Dr. Joseph E. Winters, Professor of Children's Diseases at the University of the City of New York, who had carefully studied for three months the results obtained at the Willard Parker Hospital. He said that in not a single case had there been the least evidence that the pseudo-membrane was checked, its exfoliation hastened, or the throat free earlier in cases treated by antitoxin than in those treated by ordinary methods. In not a single septic case did the antitoxin make the least impression on the symptoms, or was the toxæmia lessened or relieved, or was there any indication in the character and frequency of the pulse or general condition of the patient to indicate that a remedy for the toxæmia had been administered. The speaker asked why antitoxin should be administered for the relief of laryngeal stenosis due to a diphtheritic pseudo-membrane, for while the latter was confined to the laryngeal mucous membrane there was no toxæmia.

In the statistics regarding intubation Dr. Biggs did not (said Dr. Winters) state that in December, 1894, 8 consecutive cases of intubation recovered without antitoxin. During the same month, at the Foundling Asylum, 12 cases of intubation in 14 cases of laryngeal diphtheria recovered without the use of antitoxin. This had not been equalled by the statistics of intubation cases treated with antitoxin.

Deaths in moribund cases should not be excluded in comparing this method of treatment with the results of former years, for moribund cases were not eliminated from the statistics of the latter. During the first three months of 1894 the death-rate from diphtheria without antitoxin was 32 per cent.; in 1895 it was 28 per cent. But during 1895 many patients were sent to the hospital to be treated with antitoxin who presented no clinical, only bacteriological, evidence of diphtheria; this was not the case in 1894, then only clinical cases were admitted.

The early treatment was insisted upon as a *sine qua non*, yet the table of statistics of the Willard Parker Hospital showed that the first two cases that recovered received the antitoxin on the eighth and sixth day respectively of the disease, while in the next 7 cases the first injection was given on the fourth day, in 2 cases on the fifth day, and in 2 cases on the third

day, and all died. It is not the date of injection that determines the result, but the individual character of the case and nature of the disease. In any case in which there was evidence that the disease was progressive in its course, the latter was not stayed or changed by the antitoxin treatment. The speaker said that Dr. Biggs stated that the first serum used at this hospital was so weak that little could be expected from it, yet it gave better results than the stronger serum. A careful study of the cases showed that there was no relation between the antitoxin treatment and the recoveries. He had seen many bad effects follow the antitoxin; the principal was an anæmia due to the effect of horse serum in dissolving the red corpuscles of man. He designated the condition of many of these children as an antitoxin septicæmia that had similar temperature curves to the cases of surgical septicæmia seen in pre-antiseptic days. It had been stated that the children at the hospital died of pneumonia after they had recovered from diphtheria, but the pneumonia was that of septicæmia. He had seen cases at the hospital die in convulsions with all the symptoms of acute inflammation of the kidneys, but in none of these cases could he get a necropsy.

He opposed the empirical method, whether based on bacteriology or anything else, and there was a factor of individual susceptibility as well as of mildness of disease that must always be considered, whatever treatment should be adopted.

PATHOLOGY

IN CHARGE OF

JOHN CAVEN, B.A., M.D., L.R.C.P. Lond.,

Professor of Pathology, University of Toronto and Ontario Veterinary College; Pathologist to Toronto General Hospital and Home for Incurables.

ASSISTED BY

JOHN A. AMYOT, M.B. Tor.,

Demonstrator of Pathology, University of Toronto; Assistant Surgeon to St. Michael's Hospital; Physician to House of Providence.

PRESERVATION OF URINE FOR EXAMINATION.

In order to arrive at the true condition of a sample of urine, the earlier it is examined the better. It is, however, sometimes impossible to obtain it for examination for many hours, or even days, after it has been passed, and it is then often entirely changed. Various substances have been recommended as anti-ferments and preservatives, but all have objectionable features. Accident recently led us to try naphthalin, and the results were as gratifying as they were unexpected. Though the substance is well-nigh insoluble in water, and a crystal added to urine remains unattacked, so far as appearances go, for days, a very minute quantity of it sufficed to preserve a couple of ounces of urine apparently unchanged for several days.—*National Druggist*.

THE ACTION OF LYMPH ON PATHOGENIC MICROBES.

Pagano (*Rif. Med.*, September 7th, 1894) draws attention to the fact that while the bactericidal properties, etc., of most of the humors of the body have been fully investigated, those of lymph have received practically no attention at the hand of bacteriologists. In a preliminary communication he draws a comparison between the bactericidal properties of blood and lymph from the same animal, obtaining the lymph from the thoracic duct of a fasting animal according to the method of Buchner and his pupils. The organisms employed were the *B. typhosus*, anthracis, and the cholera spirillum, a definite quantity of broth culture of these organisms being introduced into tubes containing equal amounts of serum and lymph drawn with antiseptic precautions 24 hours before. After careful mixing to distribute the organisms, plate cultivations were

made immediately and at stated intervals, and these showed in every case that while the serum was distinctly bactericidal the lymph was not only bactericidal, but afforded an excellent medium for bacterial development. In all cases the plates made from the lymph tubes after a few hours were considerably richer in colonies than those taken from the same tubes at the commencement, while the reverse was the case with the serum tubes. These results have an important bearing on the modern theories of immunity, and the author is now engaged in amplifying his researches in this connection.

TREATMENT OF CANCER OF THE STOMACH BY CHLORATE OF SODIUM AND ARISTOL. (HUCHARD.)

The idea of using chlorate of sodium in cancer of the stomach is due to the local beneficial effects of chlorate of potassium upon epithelioma of the upper part of the digestive tract, and upon similar lesions of the skin. The latter salt cannot, however, be administered internally in large and continued doses without producing toxic effects. The chlorate of sodium is hardly toxic even with doses of 10 to 16 grammes (154 to 246 grains), it is more soluble than the potassium salt, and is eliminated more rapidly. It is administered by dissolving in 150 to 200 c.c. of water (about 5 to 7 oz.), and taking a dessert spoonful at a time through the day, in order to exercise a continual local action upon the growth, and also upon the mucous membrane of the stomach. The above dose of 16 grammes ought never to be exceeded, and even this cannot always be tolerated, owing to gastric irritation and vomiting. Patients submitted to this treatment for over a year have been certainly relieved, the appetite improved, pain diminished, vomiting, and even hæmatemesis, ceased; there was also a favorable action upon the secretion of hydrochloric acid, and the patients improved in nutrition. As to the curative properties of the drug, further and long-continued observations are necessary before any statement can be made. In the meantime, it is a considerable gain to relieve the functional symptoms in a disease so incurable as cancer of the stomach.

Dr. Huchard also suggests the use of chlorate of sodium in those forms of dyspepsia attended by diminution of hydrochloric acid, and has obtained some good results. Aristol is another drug which was thought likely to be of service, owing to the good results reported from its local application to epithelioma of the face. Dr. Huchard, however, found that the good effects produced were notably inferior to those obtained from the chlorate of sodium, and only uses it when the stage of ulceration has been reached.—*Medical Chronicle*.

HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

WILLIAM OLDRIGHT, M.A., M.D. Tor.,

Professor of Hygiene in the University of Toronto; Surgeon to St. Michael's Hospital;

AND

E. HERBERT ADAMS, M.D., D.D.S.,

Assistant Demonstrator of Anatomy, University of Toronto; Physician to Victoria Hospital for Sick Children; Clinical Lecturer on Diseases of Children in the Woman's Medical College.

MOUTH HYGIENE.

The care of the patient's teeth is a matter too often neglected by the medical adviser, principally, no doubt, because of the important position the dentist now occupies in relation to every well-to-do family. The vast majority, however, of those seeking medical advice never go near a dentist unless for the purpose of having a root extracted. School children, the inmates of homes, asylums, prisons, and even hospitals, are shamefully neglected in this particular. In most public institutions not only is the tooth brush unknown, but it is almost an impossibility to secure proper cleansing of the teeth even in those taking mercury, for instance, where the danger of salivation is much increased by this neglect. Many institutions have gentlemen of the dental profession connected with their boards, but the teeth are much more apt to be overlooked than any other portion of the economy, and their everyday toilet slighted. It is, indeed, not an uncommon experience to find those who, in health, never omit the morning brush go for days and weeks together without proper mouth-cleaning when they are sick—the time above all others when the brush is most required. Of course, if the patient is too ill, an antiseptic mouth-wash may replace it in a measure. A little volume of popular essays on the care of the teeth and mouth has just been published by Victor C. Bell, A.B., D.D.S., and we mention it here, not because of any new ideas or theories it embodies, nor because of its literary merit or beauty of illustration, for many things are more attractive than casts of irregular teeth and pictures of false sets. Such information as it contains, however, is most important for all to know, and if the advice given were followed many a pain would be spared and many a tooth saved.

The proper care of the teeth of school children is receiving more attention in England than it formerly did, and no little credit is due to Dr.

Cunningham, of Cambridge University, for his efforts in behalf of school-children's teeth, and his contributions on this subject to the Seventh International Congress of Hygiene and Demography, and his essay on oral hygiene, for which he was awarded the gold-medal prize at the International Dental Congress held in Chicago during the World's Fair.

This gentleman says that parents and schoolmasters pay so much more attention to the quality of the child's food than they do to an efficient dental mechanism for mastication because of their ignorance of its importance, and of the advantages, both economic and educational, to be derived from adequate attention to the teeth.

In speaking of tooth powders he says : "The principal action should be mechanical rather than medicinal. The powder should be very finely grained, and should contain no cuttle-fish powder, no powdered oyster-shells, no pumice powder. It should consist of alkaline substances and contain no acid ingredients, nor such as are capable of changing to acid in the mouth. All fermentable substances, such as carbohydrates, are contraindicated." He agrees with Miller, that precipitated chalk should be the basis of a powder, and he also recommends a dash of neutral or slightly alkaline soap. He also considers a tooth soap preferable to tooth powder.

The physician need not be told how great is the necessity to the economy of sound teeth, nor need we enumerate the pathological conditions traceable to their decay ; but all must admit and regret the shocking lack of general information upon this important subject, and the need for instruction, especially in the schools. We commend, therefore, the diffusion of knowledge concerning teeth, and if the wood-cuts of artificial upper dentures, interdental splints, cleft palates, obturators, and drills contained in Dr. Bell's book will have the effect of frightening people into an early visit to a dentist, and if infants will gaze upon irregular dentition as depicted upon page 61, and never after suck their thumbs, much will have been gained for the cause of mouth beauty as well as mouth purity.—*New York Medical Record*.

CAUSE OF DEATH.

According to the census of 1890, of every 10,000 deaths in the United States one will be from calculus, thirty-five due to Bright's disease, forty to fevers other than typhoid, fifty-nine to rheumatism, seventy to scrofula, 130 to cancer, 140 to apoplexy, 148 to whooping cough, 160 to dysentery, 190 to meningitis, 220 to scarlatina, 246 to ague, 250 to convulsions, 310 to typhoid fever, 350 to heart trouble, 480 to diphtheria, 880 to diarrhœa, and 1,420 to phthisis.—*Medical Age*.

Editorials.

CANADIAN MEDICAL ASSOCIATION.

THE next meeting of the Canadian Medical Association will be held in Kingston, August 28, 29, and 30. We learn from the secretary, Dr. F. N. G. Starr, 394 Markham street, Toronto, that the prospects for a successful meeting are good. It will be remembered that the meeting last year was held in St. John, N.B., and was said by those present to be one of the most interesting that the association has known. Dr. Bayard, of St. John, the president, is, we are glad to hear, in *good form* (although eighty-two years of age), and hopes to bring to Kingston a good contingent from the maritime provinces.

We understand the physicians of Kingston are taking a lively interest in the meeting, and have already made the necessary arrangements. This will be the second meeting held in the Limestone City, the first having been held in September, 1883, under the presidency of Dr. Mullin, of Hamilton. This meeting was not, in all respects, successful. Many good papers were read, and a fair number of interesting discussions took place, but the numbers were small—about eighty. One very pleasant feature connected with it was the cordial reception given by the physicians of Kingston and vicinity. It is to be hoped that a memory of such kindness and courtesy will induce the majority of those then in attendance to put in an appearance this year; and that a general desire for the well-being of our national medical society will have an influence with other members, as well as non-members, in the same direction. Kingston is a fine old city, with the most pleasant sort of surroundings, and is a most charming place to visit in the month of August.

THE ONTARIO MEDICAL ASSOCIATION.

WE have kept our readers fairly well informed as to the arrangements for the coming meeting of the Ontario Medical Association, which will be held in Toronto, June 5th and 6th. We are told by the enthusiastic and energetic chairman of the Committee on Papers and

Business, Dr. N. A. Powell, of Toronto, that, for the first time in the history of the society, there is a plethora of papers, more being promised than the committee knows what to do with. It is, of course, desirable that many papers be read, and that intelligent discussions on the same ensue. We are requested to ask those who present papers to make them as brief as possible. Ten minutes for each paper will answer very nicely. The committee will even forgive an author who cuts his time down to eight minutes. Its members appreciate fully the beauties of an extensive introduction, the great value of a profuse apology lengthened out in orthodox style, and the sublime beauties of an eloquent peroration ; but, at the same time, they have decided, with a certain amount of grief, to ask the paper-readers to refrain from indulgence in these ornate extras at the coming meeting. In certain cases it will scarcely be possible, even if it were advisable, to complete the presentation of the subject within such narrow time-limits ; but the author of a necessarily long paper will be expected to furnish, if possible, an abstract sufficiently intelligible to call forth discussion, with the understanding that the paper may be published in full in some medical journal. The association does not publish an official report of its transactions, and the rule which at present obtains (in accordance with a resolution passed in 1893) is that each member remains in possession of any paper he reads, and may publish it where he chooses.

LOCAL MEDICAL SOCIETIES.

IN many respects local medical societies, such as those existing in cities, towns, or counties, are more important than the larger associations, whether Canadian in its widest sense, or provincial. Frequent meetings of physicians working side by side do good in various ways. They, of course, do much in the way of keeping doctors abreast of the times in matters purely medical. At the same time they make men broader in their views, and more charitable towards one another. Nothing is more deplorable than the sight, so often witnessed in a small town, of each doctor perpetually endeavoring to *down the other fellow*. While the unholy warfare is going on each party to the contest is frequently growing smaller and meaner from year to year. This sort of thing is, of course, not confined either to small cities or small towns ; but it appears to worst advantage when seen in a village containing only two doctors. Max O'Rell tells us that, if two Scotchmen were left alone on a small island, they would soon form a Caledonian society. If the two doctors could imitate the clanship and brotherhood of the two Highlanders, the benefits accruing to them would be very great, both from a pecuniary and a scientific point of view.

We have in Ontario a number of county societies, some of which are doing excellent work. In certain districts two counties join their forces, as, for instance, Huron and Bruce, with exceedingly good results. We notice with pleasure the formation of a new society under the name of "The Waterloo and Wellington Medical Association," the first meeting of which was held in Berlin, May 6th, as will be seen in our brief report in this issue. There had been a society in the county of Waterloo for three years, and the meeting referred to was the third annual meeting of that society. A number of physicians from Guelph and vicinity attended the meeting, and arrangements for the enlargement were soon made. The first meeting of the new society will be held in Guelph in July. We will watch its career with considerable interest, and only hope that its success will reach our expectations.

INFLUENZA.

WE may have learned much about influenza, both as to its diagnosis and treatment; but we have to acknowledge with due meekness and humility that our knowledge of the disease is still far from definite and perfect. Mr. Malcolm Morris, speaking editorially in *The Practitioner* for April, says: "It must be admitted that the influenza is an *opprobrium medicinæ* of a very positive kind. The experience of five severe epidemics has brought us no nearer to the discovery of any means of dealing effectually with the scourge." Our experience in Canada has taught us pretty much the same thing; yet we think we have now some better ideas about its therapeutics than we had five years ago. Perhaps the best lesson we have learned is that it is a dangerous disease, both as to its immediate and remote effects, especially in certain classes, including the old and those debilitated from any causes.

We have no specific in the shape of medicine—we have almost lost hope of procuring one. We have gained some ground, however. We acknowledge the danger connected with influenza—we are thoroughly afraid of it. The facetious down-town man, who, a few years ago, was so irresistibly funny about the *la grippe* epidemic, has either died, or attended some one or more funerals resulting directly from this trifling, mysterious thing which made him so humorous in days gone by. We all respect influenza now. Most of us accept its attacks in the most kindly spirit, and quietly go to bed with it. We who do so are wise men; nothing is more likely to do us good, and prevent evil after-effects. The busy man, who has no time for rest, but must fight what seems to him a trifling cold, may be alive; but many of his sort have risked too much,

and have passed over to the *great majority*. Unfortunately, we cannot as yet distinguish, with anything like certainty in the earlier stages, between a common cold and severe influenza, whether or not the latter be accompanied with Pfeiffer's bacillus.

Fortunately, we have learned that the administration of antipyrine, and other remedies of the same series, is not devoid of danger. Even certain druggists, stupid and venturesome though they be, are commencing to realize that verdicts of manslaughter may be their reward in the future if they prescribe the antipyretics for their patients without due care. Of course we make no reference to the minority of druggists (we know not how small it is) who do no counter prescribing. In future epidemics of a serious character the present generation is likely to treat influenza with all due respect, and adopt precautions against its numerous disastrous results. In the meantime, we do not wish to discourage bacteriologists or therapeutists in their laudable efforts to discover the nature and the proper treatment of the "scourge."

CIVIC GRANTS TO HOSPITALS.

IT has been the custom for many years for the council of Toronto to pay a certain sum (forty cents per day) for maintenance of each pauper patient admitted into the General Hospital. For a time similar payments were made to St. John's Hospital for Women, St. Michael's Hospital, and Grace Hospital (homœopathic). During the civic year 1894-5, such payments were withheld from St. Michael's and St. John's Hospitals on the ground that they were sectarian institutions. At a meeting of the council held in April, this action was reversed; and, as a consequence, these two hospitals will be placed on the same footing as the Toronto General and Grace Hospitals. This decision is generally acceptable to the profession of Toronto.

Correspondence.

TRAINING OF ASYLUM NURSES.

To the Editor of THE CANADIAN PRACTITIONER :

SIR,—A paragraph published in THE PRACTITIONER for April is very misleading, and in line with a letter written by Dr. Adams to *The Globe* a short time since. The paragraph and letter refer to the training of asylum nurses, and one would suppose that this subject had been overlooked in Ontario. It is the old story of a prophet being without honor in his own country.

As a matter of fact, Rockwood Hospital for the Insane, Kingston, was one of the pioneers in educating asylum nurses, and the Rockwood Training School was founded no less than seven years ago. Our graduates have done admirable work, and many of them are occupying positions of trust and responsibility in Canada and the United States.

Dr. Clark, of Rockwood, with Dr. Cowles, of Boston, Dr. Dewey, of Chicago, and Dr. Curwen, of Warren, was selected by the Medico-Psychological Society of America, two years ago, to draft a scheme of education suitable for all American asylums. It may also be said, Dr. Adams to the contrary, that the scientific work being done in some of the Ontario institutions places them in the front rank.

J. M. FORSTER,
Assistant Superintendent.

Rockwood Hospital, Kingston, April 27, 1895.

Meetings of Medical Societies.

TORONTO CLINICAL SOCIETY.

THE last meeting of the Clinical Society for the season was held in St. George's Hall, May 8th, 1895.

President Dr. Ryerson in the chair.

Members present: Ryerson, Atherton, Meyers, Aikins, King, J. A. Temple, Graham, Brown, J. O. Orr, Baines, Murray, MacDonagh, Little, Greig, Walker, Bingham, Wright, Leslie, and Barrick.

Dr. James E. Graham presented a patient, a young woman aged twenty-six, who had suffered from an attack of pneumonia eight years ago, which was followed by an empyema. She had been coughing up pus ever since then, coughing up as much as a half-pint in twenty-four hours. The other lung was in fairly good condition, somewhat emphysematous and enlarged. The other lung's side was very much contracted. A peculiar feature about the case was that both in front and behind there was a musical bruit with each systole of the heart. What produced it he was not prepared to say. He had another patient, a young man, suffering from the same condition of chest, in which a similar bruit could be heard, whom he presented to the society for examination. He asked the opinion of the Fellows as to the advisability of an operation to relieve the condition in the two cases. In the first case there were exaggerated breath sounds on the upper part of the side affected. Vocal fremitus was absent in the lower portion, and the breathing was somewhat tubular.

Dr. Graham also read the history of the second case.

In October, 1894, the patient was seized with severe pain in the region of the liver in the axillary line. Was treated for abscess of the liver, in New York. Lost flesh. Was troubled with profuse sweating. Two weeks after coughed up considerable matter of a reddish, dirty color. In January, 1895, was admitted to the Toronto General Hospital; temperature ran up to 100°, 102°, 104°, with morning remissions. About two months ago the chest was aspirated, but no pus found. Breathing is now regular, expiration prolonged, more expansion on the left than the right side.

Coughs a great deal, and expectorates up a large amount of foetid matter. No tubercle bacilli are to be found in the sputa, but a good many pus organisms.

In both cases the empyema had opened into the bronchus before he had seen the patients. He thought possibly the bruits might be due to the presence of a cavity filled with air in which the heart sound was echoed. The chests of both patients were examined by the Fellows.

Dr. Aikins asked how long the last case had run. He said about three months ago one of the servants at the General Hospital had come under his care, suffering from an attack of influenza. Pleurisy developed, with the accumulation of a large effusion in the chest. The heart was very much displaced, and there was great difficulty in breathing. Although in the acute stage, as the symptoms were very distressing, assisted by Dr. MacMahon, they aspirated, drawing off about forty ounces of serous fluid. The distress was relieved. The patient improved in almost every way, but there was no diminution of the fluid. About three weeks ago, with a hypodermic needle, pus was discovered and a second aspiration performed, when about thirty ounces were withdrawn. Patient began to cough, and coughed up a considerable quantity of pus. He thought there was now pneumothorax, with pus in the pleural cavity. He asked for the opinion of members as to operative procedure.

Dr. J. A. Temple said that he had one case of chronic empyema in a man, a case of long duration. The man coughed up pus. It was decided to open the chest. Assisted by the late Dr. Fulton, he removed a portion of two ribs, opening into a large pus cavity. The walls of the sac were very thick. They drained and washed out and an excellent recovery followed. He did not think any harm could be done by cutting down upon the cavity.

Dr. J. E. Graham said one difficulty was in locating the pus. It was often difficult in aspirating to strike the cavity, in trying to locate it. In the second case aspiration had been tried, but pus was not discovered.

Dr. W. J. Greig said that it might be well to remember that there was a great deal of thickening of the pleura in these cases, and, for that reason, it was often difficult to aspirate, the needle not penetrating the tough tissue. It often required several attempts to reach the pus.

Dr. E. E. King thought operation was perfectly justifiable in both cases, particularly in the girl's case.

Dr. J. N. E. Brown presented some patches of skin which had been thrown off from a smallpox patient during desquamation. The portions from the soles of the feet were two inches square, the pocks *in situ* being very plainly shown.

Dr. George R. McDonagh read a paper on "Disease of the Middle Turbinate, with Pus in the Ethmoid Cells." The disease usually resulted

from trauma, or from extension from the nasal cavities. On examination there was found to be thickening of the anterior portion of the middle turbinate, and very frequently the presence of granulations. On introducing a probe small siccule of bone may be felt. The irritation of the mucous membrane by those leads to the formation of polypi. At the seat of granulation the bone may be found to be cleft, and pus exuding. It causes symptoms of tightness over the bridge of the nose, headache, and neuralgia. There were various reflex phenomena to be observed, which he would not refer to. By trans-illumination the wall of the face over that portion would be found to be opaque. Treatment in the early stage, before the involvement of the ethmoid cells, consisted in the application of chromic acid or the galvano-cautery to the hypertrophied mucous membrane. If distinct cleavage had taken place and polypi present, they must be removed. His plan was to remove the inner half of the bone, and thus open the ethmoid cavity, and wash out antiseptically with pyrozone or iodoform and glycerine.

Dr. Ryerson said, in addition to the symptoms Dr. MacDonagh had mentioned, he had found patients complain of pain and tenderness over the inner angle of the eye, and the appearance of swelling of the bone. In one case he had cut down and trephined. A large quantity of pus and broken-down tissue were thrown off. That was probably in connection with the front of the sinus. The disease seemed to extend into the ethmoid. In another case he had attempted to perforate the ethmoid through the nose. In endeavoring to open it the drill broke off. It was afterwards cast off. The patient did not seem to suffer much inconvenience. With a trochar he had washed out much in the same way as Dr. MacDonagh recommended. He believed these cases were much more common than was generally supposed. Many cases of catarrh and polypi, he believed, were really disease of the ethmoid, and the only treatment that would be beneficial was the one described. He was in the habit of scraping with a curette with malleable handle. He reported a case where he had used pyrozone, where symptoms of constitutional poisoning presented themselves. There were alarming symptoms for a few minutes. The patient felt severe distress in the head, the pulse was irregular and weak, but she soon recovered. He was not sure whether the symptoms were caused by the pyrozone, or from the extension of the disease to the brain cavity. Since then he had been cautious in the use of pyrozone in closed cavities.

Dr. MacDonagh said that when this disease extended into the sphenoidal or frontal sinuses, as it often did, the symptom referred to by Dr. Ryerson was often present. He thought there was no danger in using pyrozone. Where there was free exit made for the pus, there would be an equal chance for the pyrozone to escape.

Dr. Ryerson reported two cases of intraocular tumor. The first case was that of a lighthouse-keeper from the northern part of the province, who had an attack of gripe, and suddenly lost his sight, apparently from detachment of the retina. Examination of the eye showed a distinct round growth or tumor in the left eye, towards the lower portion. It was of a grayish-pink color, and it appeared to be either a growth or a detachment. He was treated for a short time by hypodermics of pilocarpine, as if for detachment. Patient went home for a time, but on returning examination revealed an intraocular tumor. The eye was removed. The tumor was found to occupy half the eye, and was sarcomatous in character. It was now some eight months, and the patient had suffered no further trouble.

The second case was that of a young man, who had been referred to him by a medical friend in New York State. A tumor could be easily detected by the ophthalmoscope. There was some bulging of the sclera. The optic nerve seemed healthy. On examining the orbit nothing could be seen or felt of further growth. The patient did well after the removal of it, making a good recovery. Three months after he came back. There was slight swelling of the orbit. He suffered also from gastric disturbances, indigestion, etc. The patient went home. Dr. Ryerson had since heard from the medical man in attendance that there was a tumor in the neighborhood of the stomach, growing very rapidly. It apparently had some connection, he believed, with the tumor of the eye, occurring, as it did, so soon after it. This was an example of those cases where the recurrence was not in the orbit, where it usually occurs, but in a distant part of the body. It was wise, therefore, in such cases to warn the patient of danger of recurrence.

The election of officers was then proceeded with, Drs. Grasett, Fotheringham, MacDonagh, Leslie, and Wright being elected as members of the council. The other officers were elected by acclamation at the last meeting.

Dr. Ryerson, the retiring President, then expressed his thanks to the secretaries and the Fellows for their assistance during the year, and introduced the President-elect, Dr. James E. Graham.

Dr. Graham thanked the Fellows for the honor they had done him, and expressed the hope that the society would enjoy the same prosperity under his presidency as it had under his successful predecessors.

The society then adjourned until the second Wednesday in October.

TORONTO MEDICAL SOCIETY.

A MEETING of this society was held on May 9th, 1895, Dr. Spence in the chair.

The minutes of the last meeting were read and adopted.

Members present, twenty-six.

Dr. Ross presented a uterus removed by vaginal hysterectomy for cancer.

Dr. J. Clingan reported nine cases of diphtheria in which antitoxin had been used. (See page 332.)

CASE 1. The patient was a boy, æt. 13, who had been suffering from osteomyelitis. Fifteen minims had been given as an immunizing dose, but the disease appeared, with membrane on the tonsils and uvula. Temperature rose to 102.4° ; 25 c.c. serum were injected, a rash appearing at the seat of injection. Throat cleared in ten days.

CASE 2 was laryngeal in character, with high temperature and marked asthenia; 25 c.c. injected the third day of the disease. Patient died.

CASE 3 presented no marked constitutional disturbance; 25 c.c. were used. Recovery.

CASE 4. Child $1\frac{1}{2}$ years of age. Tonsils and palate affected. Cervical adenitis. Temperature during day of injection 104° ; day after, $104\frac{4}{8}^{\circ}$. Patient died in four days. Tissue round the seat of the injection became black twelve hours after the injection. Post-mortem showed a membrane on the tonsils, hard and soft palate, and gangrenous ulceration of the superior margin of the superior maxilla, some of the teeth having dropped out.

CASE 5. The patient, a boy, æt. 9, had been operated on for suppurating glands of the neck. Received an immunizing injection of 15 c.c., but contracted the disease; 25 c.c. injected, but no appreciable response. Recovery followed, but there was some paralysis of the throat muscles, rendering swallowing difficult.

CASE 6. Disease occurred in a boy who had undergone nephrectomy for sarcoma. There was laryngeal involvement. Antitoxin used, but death followed.

CASE 7 had undergone operation for cleft palate, an asthenic patient. Pharynx, uvula, and hard and soft palate, with membrane. Fatal.

CASE 8. Patient had been treated for five weeks for inanition. No membrane to be seen in the throat. Fatal.

CASE 9. Woman, æt. 30. Marked pharyngeal congestion. Involvement of palates, uvula. Membrane seen on all these structures. Adenitis. Erysipelatous rash appeared at the site of the injection. This was followed by a measly rash over body. Recovery.

In all, five died and four recovered. Klebs-Loeffler bacillus found in all; streptococci in some. In most cases there was no constitutional response to injection. Those in which there were laryngeal symptoms were also treated by steam and calomel fumigation. Whiskey and strychnine were also administered. In the pharyngeal sprays of bichloride, pyrozone and peroxide of hydrogen were used. Some of the patients received iron.

Dr. Fenton reported four cases.

CASE 1. Girl, æt. 9. Muco-purulent discharge from right nostril. Glands enlarged. Spots of membrane on the tonsils. Croupy cough. Klebs-Loeffler bacillus and staphylococci found; 6 c.c. Behring's serum injected, 3 c.c. in twelve hours afterward. Membrane disappeared in three days. Nostril was irrigated with water.

CASE 2. The specific bacillus was not found, but there was laryngeal involvement. Calomel fumigation was employed. Recovery.

CASE 3. Bacillus not found. Symptoms slight. Recovery.

CASE 4. Almost pure culture of the specific bacilli found. Tonsils nearly covered with membrane; also found on the uvula. Temperature reached 105°. Sponging was employed; 6 c.c. used; 3 c.c. in nine hours. Recovery. Throat cleared in two and a half days.

CASE 1. Dr. McPhedran said in his first case the diagnosis of the disease was only clinical. Patient, girl, æt. 6. Membrane disappeared in nine days. There was some adenitis. Recovery uneventful.

CASE 2. Patient, æt. 1½ years. Primary laryngeal. No cultures could be obtained. Antitoxin used on the second day; 42 c.c. used during four days. Recovery. Membrane disappeared in a week. Urticarial rash on fifth day, lasting a week.

CASE 3. Child, æt. 2½ years. Ill forty-eight hours when seen. Tonsils and uvula were swollen, and showed presence of membrane. Antitoxin commenced on the third day; 33 c.c. used altogether. There was great prostration present. But the deposit soon began to separate and the swelling to subside. Recovery followed. Serum in this case was obtained from New York. In the other cases Behring's was used. Calomel fumigation was tried in the third case. It made both the mother and nurse ill. They were greatly prostrated, and suffered from diarrhœa. The child suffered no such untoward symptoms. Pyrozone was used locally, and iron and chlorate of potash internally.

Dr. Oldright reported three cases.

He had used, he said, the antitoxin in six cases for immunizing those exposed, in addition to using it in the three cases reported.

CASE 1. Clinical diagnosis. Two days after treatment by the serum bacteriological examination made, but negative. Laryngeal obstruction.

Cough, raising yellowish muco-purulent matter. Cervical glands very much swollen. Temperature 102° . Used 12 c.c. Temperature fell and the child recovered. Used iron and chlorate of potash with small doses of bichloride at the same time. Syringed the throat with papoid and soda. Urticarial rash developed, resembling German measles.

CASE 2. Young man, 28. Temperature 104° . Thought that it was follicular tonsillitis. Great pain and nervousness. On seventh day, diagnosis of diphtheria was made. 12 c.c. Roux's antitoxin were injected, and the next day 25 c.c. additional given. There was no fall of the temperature after the first dose, but there was after the second. On the ninth day it rose again to over 102° . 14 c.c. given, temperature fell to 101° . 11 c.c. were given on the tenth day. On the eleventh day temperature fell to 99° . Recovery. Klebs-Loeffler bacilli and streptococci found. The remedies used additional were those used in the preceding case.

CASE 3. Classical symptoms present. Same treatment used as in previous case. Recovery. Small amount of paralysis of the eyeballs followed.

The speaker said that he did not rely wholly on the antitoxin, but he thought it was helpful, the membrane disappearing more quickly. He thought there was an exaggerated fear of the disease. He was not sure but what the cases would have recovered under the ordinary treatment, the cases this year not being so virulent as usual.

Dr. Rogers reported three cases. There had been no bacteriological confirmation of the diagnosis; but as the cases had followed one of diphtheria in the same family, he considered that the cases were almost undoubted.

CASE 1 occurred in a girl aged three. Both nostrils were almost filled with membrane, and it was also found on the left tonsil. Epistaxis was a prominent symptom. The temperature reached 103° . Albumin was found in the urine. 15 c.c. of the serum were given on the third day of the disease. The temperature fell from 105° to 99.2° in forty-eight hours. An urticarial rash appeared. On the third day after the injection no albumin was discoverable in the urine. The membrane began to disappear on the second day after its use.

CASE 2 was a man, *æt.* 35. 5 c.c. had been previously given as a prophylactic measure. The symptoms were not marked. Considerable rise in the pulse followed a second dose given after the disease was established.

CASE 3, in a boy, *æt.* 5, was the most serious. The throat symptoms were well marked, and the constitutional symptoms severe. Second day 12 c.c. were given. A few hours afterward there was a marked improvement. The membrane presented a bleached appearance, and the edges looked ragged. Patient made a good recovery.

In all the cases iron and chloride of potash were used internally, and sprays of sulphurous acid.

Dr. F. N. G. Starr reported a case occurring in a child, æt. 2 1/2. When seen by him the child was very much depressed, constitutional symptoms being marked. There appeared to be laryngeal complication, judging from the cough at first; and this became so severe as to necessitate intubation. The tube was coughed up, and also a membranous cast of the larynx. Although the child was exceedingly depressed, not much relief followed. The antitoxin was used in doses of 12 c.c., and also vigorous stimulation. The throat entirely cleared. Meningitis set in as a sequelæ, from which the child succumbed.

Dr. Toole, whose case the above was, reported on the nature of the convulsions. He added that calomel fumigation was used, and also sprays of bichloride.

Dr. Thistle stated that in the cases under his care upon which Dr. Clingan had reported hydrogen peroxide had been freely used. He did not think that, in the cases reported, the antitoxin treatment had effected any particular result.

Dr. McMahon said that he agreed with Dr. Thistle. He extolled highly the use of calomel fumigation in the laryngeal type. He had often noted the unpleasant effects of the fumigation upon the attendants.

Mr. McKenzie, bacteriologist of the Provincial Board of Health, said that antitoxin had been successful in laboratory work in the inoculation of animals. Of course, clinically, there was a difference, because there was often a mixed infection. In the cases reported by Dr. Clingan, he did not consider the amount of serum used was sufficient to have any curative effects. He then gave a comparison of strengths of the various serums on the market.

Dr. Spence thought that the use of iron was of more value than the various antiseptics, or even the antitoxin.

Dr. Wilson said that he had found where there was much adenitis he was disposed to give an unfavorable prognosis. He considered the cases of nasal diphtheria worse than the laryngeal types. He thought that it was wise to use every remedy that was helpful in any way.

Dr. Machell said that there were some forms that seemed most unfavorable from the first, and continued so in spite of all treatment. He referred to one case where the adenitis was so marked in a stout young woman as to cause the neck to swell out to a line from the chin to the chest. Antitoxin nor any other treatment would cure such a case. Another case under his care was admitted to the hospital with croupy symptoms. The patient died very suddenly. Post-mortem showed membrane extending to the lung. Antitoxin had been used.

Dr. McPhedran said that he was inclined to look favorably upon the use of antitoxin. He said it was impossible to keep the throat of an adult antiseptically, let alone that of a child. The antitoxin saved the tissues from the ravages of the diphtheritic poison if used early. But it would not restore tissues already vitiated by the diphtheritic poison. So it should be used early.

Drs. Oldright, Rogers, and Starr also took further part in the discussion.

On motion of the secretary, the discussion was postponed until the next night.

THE WATERLOO AND WELLINGTON MEDICAL ASSOCIATION.

THE third annual meeting of the Waterloo County Medical Association was held in the council chambers, Berlin, Ont., May 6, with Dr. H. G. Lackner, president, in the chair. The medical profession of Wellington have been in correspondence for some time to effect a union, if possible, and form a conjoint association comprising the two counties. A strong deputation from Guelph was present, and the proposition was very carefully considered. It was finally adjusted, and hereafter the society will be known as the Waterloo and Wellington Medical Association.

The president then retired, and the following officers were elected for the ensuing year: President, Dr. D. S. Bowlby, Berlin; first vice-president, Dr. A. McKinnon, Guelph; second vice-president, Dr. Webb, Waterloo; third vice-president, Dr. Cameron, Galt; treasurer, Dr. Howitt, Guelph; corresponding secretary, Dr. G. H. Bowlby, Berlin; recording secretary, Dr. Lindsay, Guelph. Committee: Dr. Lundy, Preston; Dr. Brock; Dr. Lett, Guelph.

Dr. Charles Trow, of Toronto, read an instructive and interesting paper on "Middle Ear Inflammations," which subsequently called for considerable discussion.

The next regular meeting of the Waterloo and Wellington Medical Association will be held in Guelph, the first Friday in July, at which Dr. A. McKinnon has promised to furnish a paper.

After a vote of thanks to Dr. Trow, the meeting adjourned.—*Mail and Empire*.

Book Reviews.

CLINICAL DIAGNOSIS. By Albert Abrams, M.D. (Heidelberg), Professor of Pathology, Cooper Medical College, San Francisco, Cal. ; Pathologist to the City and County Hospital, San Francisco ; author of "A Synopsis of Morbid Renal Secretions," etc. ; President of the San Francisco Medico-Chirurgical Society (1893-94) ; President of the Alumni Association of Cooper Medical College (1888-89). Third edition, revised and enlarged, illustrated. New York : E. P. Treat, 5 Cooper Union, 1894. Price, \$2.75.

This book, which has been adopted as a text-book in a number of American colleges, is well deserving of the place it holds with the medical profession. It is the most concise and comprehensive work on the subject that we are acquainted with. In this edition the book has received some valuable additions and improvements, among which will be found the most recent methods of diagnosis. The chapters on "The Digestive System" and "The Genito-Urinary System" are particularly to be commended. The book is well gotten up, and the student will find in it all that is desirable on the subject.

MENTAL DISEASES. By Dr. Daniel Clark, Extra-Mural Professor of Mental Diseases, Toronto University, etc. Toronto : William Briggs.

One of the most important additions recently made to the curriculum of the Ontario Medical Council is that of Psychology.

This advance was first made by Toronto University when Dr. Clark was made Professor of Mental Diseases.

As extra-mural professor, Dr. Clark now gives instruction to all the medical students of the city in this important department. It is a matter of great surprise that such a course should not have been established much earlier. As a result, a great number of the older practitioners have not had the advantage of such a training as is now given to every medical student.

In cases of insanity, above all others, an early diagnosis is necessary if a cure is to be hoped for. The general practitioner who first comes in contact with such cases should be able to make a correct diagnosis, so that appropriate treatment may at once be adopted.

In the work before us Dr. Clark has given an excellent description of the principal types of mental diseases, illustrated by cases which have come under his own observation, and in the same practical way he has laid down principles of treatment which ought to be of great service to the general practitioner.

The classification adopted is that recommended by the great majority of modern writers, and is probably the only one feasible in the present state of

our knowledge. We hope, however, in the near future that such advances will be made in the pathology of mental disease that a classification, based on pathology as well as on symptomatology, will become possible.

The chapter on Paronaria is of special interest. The definition, symptoms, course, and management are clearly given, and, as such cases are often met with outside asylums, a full knowledge of the subject is of great importance to the physician.

As stated in the preface, the book is intended for the senior medical student, and the busy physician who may have neither time nor opportunity to study the higher and more intricate branches of psycho-physics. We can recommend the work to the latter as well as the former class, feeling assured that it will prove interesting and instructive.

We would again refer to the treatment of insanity, which is made a prominent feature, and, as it is written by a man of such wide experience as Dr. Clark, it ought to be of great use to the practitioner.

The typography, paper, and binding reflect credit on the publishers.

The following books and pamphlets have been received :

TRANSACTIONS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.
Third series. Vol. xvi. Philadelphia : Printed for the College.

LESSONS IN PHYSICAL DIAGNOSIS. By Alfred L. Loomis, M.D., LL.D.
Tenth edition. Revised and enlarged. New York : William Wood & Co.

CHRONIC INFLAMMATION OF THE SEMINAL VESICLES. By Gardner W. Allen, M.D., of Boston. Read at the annual meeting of the Massachusetts Medical Society, June 13, 1894.

SURGICAL ASEPSIS. By Carl Beck, M.D., Surgeon to St. Mark's Hospital ; the German Poliklinik ; Instructor in Surgery, New York Post-Graduate Medical School, etc. Price, \$1.25 net.

TRANSACTIONS OF THE ANTISEPTIC CLUB. Reported by Albert Abrams, a member of the San Francisco medical profession. Illustrated. Price, \$1 75. New York : E. B. Treat, 5 Cooper Union.

THE TREATMENT OF WOUNDS, ULCERS, AND ABSCESES. By W. Watson Cheyne, M.B.Ed., F.R.S., F.R.C.S., Professor of Surgery in King's College ; Surgeon to King's College Hospital and Paddington Green Children's Hospital, London. Philadelphia : Lea Brothers & Co., 1895.

DOSE-BOOK AND MANUAL OF PRESCRIPTION-WRITING, with a list of the official drugs and preparations, and also many of the newer remedies now frequently used, with their doses. By E. Q. Thornton, M.D., Ph.G., Demonstrator of Therapeutics, Jefferson Medical College of Philadelphia ; Acting Assistant-Surgeon United States Marine Hospital Service. Philadelphia : W. B. Saunders, 925 Walnut street, 1895.

THE YEAR-BOOK OF TREATMENT FOR 1895. A Critical Review for Practitioners of Medicine and Surgery. Contributors : Barclay J. Baron, M.B. ; Dudley W. Buxton, M.D. ; Alfred Cooper, F.R.C.S. ; Sidney Coupland, M.D. ; George P. Field, M.R.C.S. ; Archibald E. Garrod, M.D. ; M. Handfield-Jones, M.D. ; Reginald Harrison, F.R.C.S. ; G. Ernest Herman, M.B. ; J. Ernest Lane, F.R.C.S. ; Robert Maguire, M.D. ; Malcolm Morris, F.R.C.S. Ed. ; Edmund Owen, F.R.C.S. ; Sidney Phillips, M.D. ; Henry Power, F.R.C.S. ; Charles Henry Ralfe, M.D., F.R.C.P. ; E. S. Reynolds, M.D. ; William Rose, M.B. ; E. Markham Skerritt, M.D. ; Walter G. Smith, M.D. ; W. J. Walsham, F.R.C.S. ; B. Arthur Whitelegge, M.D. ; Dawson Williams, M.D. Philadelphia : Lea Brothers & Co., 1895.

INTERNATIONAL CLINICS. A Quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Genito-Urinary Surgery, Gynæcology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology, and Dermatology. By professors and lecturers in the leading medical colleges of the United States, Germany, France, Great Britain, and Canada. Edited by Judson Daland, M.D. (University of Pennsylvania), Philadelphia, Instructor in Clinical Medicine and Lecturer on Physical Diagnosis in the University of Pennsylvania ; Assistant Physician to the Hospital of the University of Pennsylvania ; Physician to the Philadelphia Hospital ; Fellow of the College of Physicians of Philadelphia. J. Mitchell Bruce, M.D., F.R.C.P., London, England, Physician to, and Lecturer on the Principles and Practice of Medicine in, the Charing Cross Hospital. David W. Finlay, M.D., F.R.C.P., Aberdeen, Scotland, Professor of Practice of Medicine in the University of Aberdeen ; Physician to, and Lecturer on Clinical Medicine in, the Aberdeen Royal Infirmary ; Consulting Physician to the Royal Hospital for Diseases of the Chest, London. Volume I., Fifth series, 1895. Philadelphia : J. B. Lippincott Company, 1895.

THE INTERNATIONAL MEDICAL ANNUAL AND PRACTITIONER'S INDEX.

A work of reference for medical practitioners. Editors and contributors : Prof. Gilbert Darling, M.B., F.R.C.S., Fancourt Barnes, M.D., Prof. Alf. H. Carter, M.D., F.R.C.P., Frederick C. Coley, M.D., William H. Elam, F.R.C.S., E. Hurry Fenwick, F.R.C.S., John Fitzgerald, L.D.S., R.C.S., I., T. Colcott Fox, B.A., F.R.C.P., J. Dundas Grant, M.D., F.R.C.S., Allan McLane Hamilton, M.D., Robert Jones, F.R.C.S., E., W. Arbuthnot Lane, F.R.C.S., H. P. Loomis, M.D., Greville Macdonald, M.D., M.R.C.S., Hector W. G. Mackenzie, M.A., M.D., William Milligan, M.D., Irving S. Haynes, Ph.B., M.D., William H. Pearse, M.D., E., Joseph Priestley, B.A., M.D., D.P.H., John Ridlon, M.A., M.D., Prof. A. W. Mayo Robson, F.R.C.S., A. D. Rockwell, M.D., M. Armand Ruffer, M.A., M.D., F. M. Sandwith, M.D., Prof. Robt. Saundby, M.D., F.R.C.P., James Shaw, M.D., G. E. Shuttleworth, B.A., M.D., W. Ramsay Smith, M.B., B.Sc., William J. Smyly, M.D., F.R.C.S., I., Simeon Snell, F.R.C.S., E., W. Blair Stewart, A.M., M.D., Prof. J. Madison Taylor, M.D., John W. Taylor, F.R.C.S., Prof. W. Gilman Thompson, M.D., W. B. Vanderpoel, M.D., Robt. L. Watkins, M.D., F. W. Koch. 1895 ; thirteenth year. New York : E. B. Treat, 5 Cooper Union. Chicago : 199 Clark street. Price, \$2.75.

Medical Items.

THE MEDICAL MAN AND THE TROLLEY-CAR.—Very soon doctors will have to enter the army or navy in order to escape peril to life and limb. The thoughtless public is delighted with their new conveyance, but the doctor finds it only a deadly peril. It helps him but little if his business is extensive, leaves him to carry by hand his various impedimenta, gives him long walks where the trolley company, *mirable dictu*, has neglected to seize a street, and long waits where it fails to run frequently, and lets him out only at prominent street corners. He cannot make it wait in grandeur before the doors of his wealthy patients, nor will the motormen and conductors wear his livery. If he drives himself, it wears out his nerves and speedily makes him hysterical or melancholy, with its deadly wire or more deadly dread of collision hanging over the tracks he must cross and recross so often. His neck is sore and stiff from twisting his head to look out of the back window of his carriage, and his eyes take on a divergent squint, which no prism or graduated tenotomy can correct, from his efforts all day to see behind him with one eye while he looks ahead with the other.

At ordinary crossings he must look eight ways at once, and an ingenious scientist has calculated that at complicated crossings, like those in Philadelphia at Ridge Avenue, Spring Garden, and Twelfth streets, or at Twenty-second and Chestnut streets—and there are many such—he will need to make at least twenty-six single and separate observations before crossing, while if we add to this the additional acts of observation necessary in avoiding foot-passengers at the various crossings, and the carts and carriages occupying either side of each trolley track, with those preceding and following the car on each track, with special observations on the nature of the roadway as to holes, uncovered manholes, spots of ice and piles of snow in winter, as to whether the motormen, drivers, and foot-passengers are of imperfect sight or hearing, or imbecile, lame, or disabled from age, we have something like one hundred and two distinct acts of observation needed, and a rapid judgment and decision based upon them, as to whether to go on, back out, or stand still, and this, too, in a time so short that human limitations as to the rapidity of sensory impressions and consequent motor reaction forbid in many cases the required action in the limited time given.

Yet upon this decision and action the safety and life of the driver will depend, to say nothing of the safety of innocent foot-passengers and others less innocent.

And, still further, the scientist estimates that in the usual morning's work

of five hours this rapid observation and decision must be repeated, in more or less complicated conditions, on the average 63.4 times.

Moreover, the trolley-car pursues him after he is safely in his home, and even in his bed—not only with dreams and night terrors of smash-ups and death, but the sleep-banishing, nerve-shattering gong, ringing always and unnecessarily, scares to death what little nervous and mental stability may be left after the day's wretchedness.

Is it any wonder that doctors are short-lived, and that their lives are destined to still greater brevity? Furthermore, our scientist gives us but little hope of any immediate relief, but thinks that in the course of time Nature will, as usual, come to our aid, and bring forth by her handmaid—evolution—from her boundless storehouse new posterior-occipital eyes, one or more, and that possibly, for here he is on uncertain ground, and fears to excite illusory hope, the great central cyclopean eye, rudiments of which still survive, may be furnished up in ten or twelve thousand years to meet the emergency temporarily, for the really serviceable new occipital eye, with sufficient backward projection and a swivel-socket like a lobster's, will take from twelve to twenty million years to evolve successfully. Thus does science ever light up the dark places of life with hope.—*Medical News.*

OBITUARY.

DR. WILLIAM HENRY TAYLOR, M.B.—Dr. W. H. Taylor, of Bradford, died early in May. He received his medical education in the Toronto School of Medicine, and graduated in the University of Toronto in 1868.

J. BARKER PETERS, M.B.—Dr. J. B. Peters was educated in the Medical Faculty of the University of Toronto, and received the degree of M.B. in 1893. During the last year of his course he was resident assistant in the Hospital for Sick Children, Toronto. After graduating he was appointed one of the resident assistants in the Toronto General Hospital, and was, in his capacity, one of the most efficient men the hospital ever knew. In the summer of 1894 he was appointed superintendent of the C.P.R. Hospital at Medicine Hat, N.W.T. He proved himself quite equal to the serious responsibilities he assumed in connection with this appointment, and his prospects seemed very bright. In the month of April he was attacked with typhoid fever, which promised to run its usual course without any serious complications or dangers until May 9, when his brother Dr. George A. Peters, of Toronto, received a telegram, which induced him to start at once for Medicine Hat. Unfortunately he died on the evening of May 11, some hours before the arrival of Dr. George. Dr. Barker Peters was one of the best (in the highest sense of the word) graduates in medicine that we have known in Toronto. He was always honest and painstaking in his work, and ever conscientious and kind in his treatment of patients placed under his care. He was unusually modest and unassuming in his manner, and yet firm and unyielding when occasion required. He had a lovable disposition which was highly appreciated by all who knew him. We knew of no man of his age who possessed a better combination of those high and sterling qualities which are bound to lead to success in a physician or surgeon. We extend our heartfelt sympathy to his bereaved relatives—to her whom he hoped to make his wife in the month of June—to all his loving friends. We have no words to portray the inexpressible sadness connected with such a death.

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Original Communications.

DISPLACEMENTS OF THE LIVER.*

By J. E. GRAHAM, M.D., M.R.C.P. LOND.,

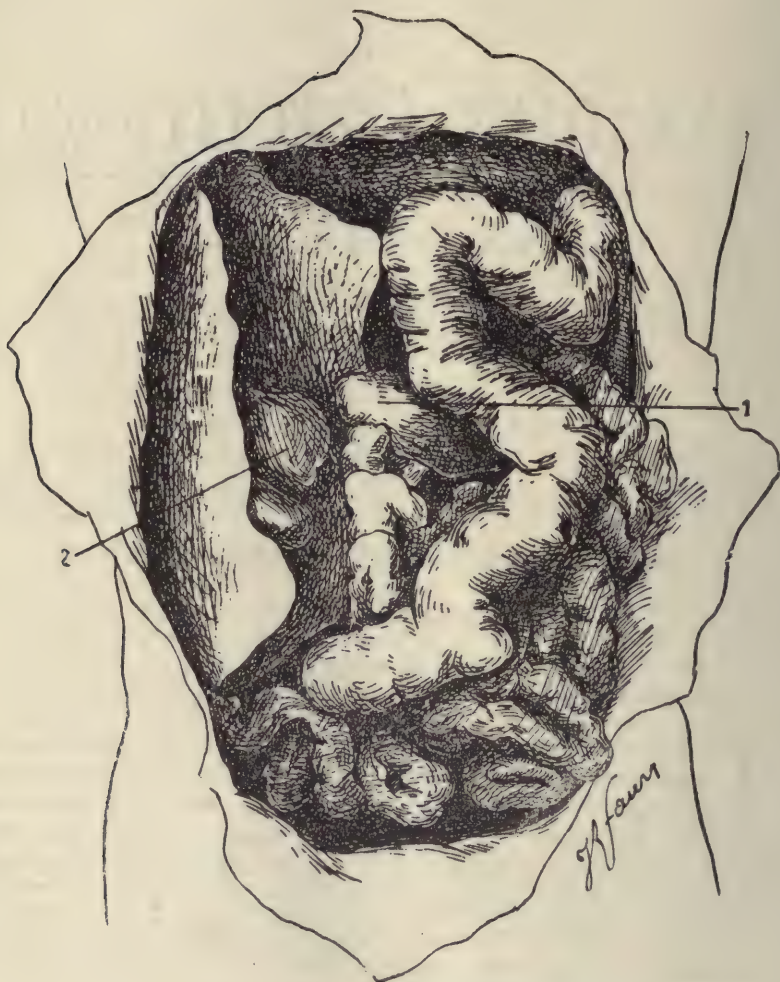
Professor of Medicine and Clinical Medicine, University of Toronto; Physician to the
Toronto General Hospital, and St. Michael's Hospital.

THE liver is freely movable within certain limits. Its position changes with each respiration, and with many of the movements of the body. It is quite probable, also, that in females with pendulous abdomen the liver may, on account of its own weight, descend an inch below its normal limit without producing any unpleasant symptoms, and that many such cases have not been noticed, nor recorded.

Cases of marked displacement, in which the normal hepatic dullness is absent, and the liver found low down in the abdominal cavity, are rare, and the number so far recorded is limited.

In 1754, Heister published a description of the post-mortem appearance of the abdominal organs in a case of hepatic displacement, and added a drawing, a representation of which I show you. This article seems to have been overlooked by almost every writer on the subject, until it was discovered by Faure, and published in his recent work at Paris in 1892.

*Read before the Association of American Physicians, Washington, May, 1895.



Facsimile of the cut which accompanies Heister's case.

1. Stomach. 2. Lobulus spigelii.

The subject is referred to by Gunzius, 1744; Bucholz, 1768; Sauvage, 1768; Portal, and one or two other writers of his time. In more recent times (1866), Cantani first published the history and description of a case.

Leopold, in 1875, collected nine cases and published them in tabulated form. In the list appended to this paper Leopold's method of classification has been, to a large extent, adopted.

Wickham Legg, in 1878, made a collection of twenty previously published cases. He expressed great doubt as to the correctness of diagnosis in these, for two apparently good reasons: (1) That in only two of the so-called cases had a post-mortem been made, and in both these the liver had been found in the normal position. (2) He stated that after a careful examination of anatomical literature, he had been unable to find the record of a single case of displaced liver. He had evidently overlooked Heister's case. Since 1878 the possibility of displacement has been proved, not only by post-mortems, but also by abdominal sections during life.

In 1885, Landau published a work, "*Die Wanderleber und der Hangebauch der Frauen*," in which he gave brief histories of sixteen cases which came under his own observation.

The last, and, perhaps, the most exhaustive work, was published in Paris, 1892, by Faure. In this a collection of fifty-four cases is given, as well as an account of a number of experiments made on the cadaver.

Some cases have been reported since, so that I have made a collection of seventy, which are herewith given in a tabulated form. In recording these cases I have taken into consideration only those in which the displacement was due to abnormal conditions below the diaphragm, excluding also such cases as are produced by tumor or abscess above the liver pressing it down. The slighter form due to pathological condition of the right chest, such as pleurisy, pneumothorax, and emphysema, are not rare, and are not here taken into consideration. Chvostek, Meissner, and Winkler have written long and able articles on this subject.

I am of opinion that the cases so far recorded might easily be divided into two classes. First, the wanderleber of the German, *fegato ambulante* of the Italian, floating river, a condition almost always found in women with pendulous abdomen, usually after frequent childbearing; and a second class, made up of both males and females in whom the causes of displacement are varied. By far the larger proportion of cases belongs to the first class.

It is probable that the number recorded bears a small proportion to the number which really exists. This opinion is strengthened by the fact that so many have been published since the observations of Cantani in 1866. Previous to that time the subject was scarcely noticed, even in treatises on the liver, such as Budd, Frerichs, etc.

Floating liver, however, is very much less frequent than floating kidney, and one cannot be surprised at this when the number and strength of the ligaments which attach the liver to the abdominal walls are considered, as well as the intimate connection between that organ, the inferior vena cava, and the right heart. The distance between the wall of the right auricle and the junction of the hepatic veins with the inferior vena cava varies from one and a quarter to one and three-quarters inches, and it is difficult to conceive how, in any way, this distance could be very much increased.

It is probable that in the ordinary state of health the ligaments of the liver are sufficiently strong to carry the whole weight of the organ without the aid of the abdominal wall. This I have demonstrated in a majority of the few experiments I have made on the cadaver.

The normal position in the recumbent posture was marked by the insertion of pins through the abdominal wall. The subject was then placed on his feet and the lower margin again marked. The abdomen was then opened, the intestines allowed to fall down, and the subject was jarred and shaken. In some cases the anterior margin of the liver did not descend lower after the abdomen was opened than before. In some, however, the liver descended an inch to an inch and a half after the abdomen had been opened. In the latter case it appeared to me that when the atmospheric pressure was removed, the length of the suspensory ligament allowed the liver to drop to the extent noted. After section of the suspensory ligaments, the anterior border of liver descended about three inches, the right lobe more than the left. The posterior margin remained fixed.

In examining the ligamentous attachments, one is struck by the great difference in their strength and thickness in different cases. For instance, in some the lateral ligaments were thick and strong enough apparently to carry the whole weight by themselves, whereas in others they were thin, weak, and easily torn. The fact that in some cases the liver rotates on its axis may be due to the varying strength of these.

In the case of women with pendulous abdomen after childbearing, it is probable that the ligaments of the liver may not have their normal strength, and the heavy weight constantly dragging upon them may in time produce an elongation not only of the ligaments, but of the inferior vena cava.

My clinical observations have been limited to three cases. One, a female, with lax abdomen, belonging to the first class; one, a male, belonging to the second class; and the other a case of subphrenic abscess which really does not belong to either class, but which I include on account of the great displacement of the liver found on post-mortem examination.

CASE I. An old lady, æt. 62 years, mother of ten children, whom I was called to see in 1885, and found suffering from dyspnoea and cyanosis

on the slightest exertion. Upon examination I found a somewhat dilated right heart, bronchitis, and emphysema. The abdomen was very pendulous, the liver somewhat enlarged and very much displaced. The upper border of relative dullness was not higher than the margin of the seventh rib in the nipple line, and the lower margin could be distinctly felt two inches below the umbilicus. When the patient was in the horizontal position the liver could be partially replaced. With rest in bed and the administration of digitalis, the patient made considerable improvement. I found, however, that each time she attempted to get up and move around the room she complained of the weight in the abdomen and of difficulty in breathing. Cyanosis rapidly followed. This condition had existed for months, and had gradually become worse. It occurred to me that the displacement and weight of the liver might be an important factor. An abdominal bandage was fitted in such a way as to support the latter organ with a most satisfactory result. The patient was able to go about the house and walk a block or two on the street, an amount of exercise she had not taken for months. The dyspnoea and cyanosis were much improved, and the patient lived for about five years in comparative comfort. She found, however, that when the supporter was laid aside the old symptoms of weight, dyspnoea, etc., quickly returned.

In this case other important pathological conditions were present besides the liver displacement—emphysema, dilated right heart, and cardiac liver. Nor was the displacement so marked as in some of the cases recorded by Leopold, for instance, but the result of the treatment demonstrated the fact that the displacement was one of the most important factors, and that support was necessary to the existence of any degree of comfort. A point of interest in connection with the case was the relationship between the position of the liver and the right heart. There was no doubt that the weight of the former had a marked influence on the production of cyanosis, and that this was relieved when the abdomen was supported.

In some of my experiments, after severing all the ligaments and drawing the liver downwards, the right auricle was slightly changed in shape and position. It was not possible, however, with an amount of force short of rupturing the ligaments, to produce any effect on the right auricle.

Upon examination of the tabulated list of cases, it will be noticed that in four or five a similar condition of dyspnoea and cyanosis is described, and that those disagreeable symptoms were relieved by the use of an abdominal support.

CASE 2. J.R., æt. 35 years, whom I was called to see in consultation on the evening previous to his death. Patient was pale, emaciated, and so weak that a thorough examination could not be made. The history

given was that the patient, a builder, had for some months suffered from severe pain in the region of the liver, together with marked symptoms of indigestion, and that for the last three weeks he had been confined to bed. He had latterly developed symptoms of peritonitis.

Upon examination, we found an enormously dilated stomach and a displaced liver. Splashing could be produced almost as low down as the pubes. The liver could be easily felt through the abdominal walls, and both splashing and stomach resonance could be obtained above and below the liver.

The diagnosis made was pyloric stenosis, gastrectasis, and hepatic displacement.

The patient died on the following morning.

The post-mortem revealed an enormously dilated stomach. The greater curvature was found in close proximity to the pubes. The cardiac orifice was found in the normal position, and the pylorus displaced downwards about two inches. The liver was situated obliquely across the front of the stomach, having been displaced downwards and to the left, the right lobe partly under the anterior portion of the diaphragm, and so displaced that the right lateral border pointed upwards, and the normal anterior border pointed to the right. The left lobe, much hypertrophied, was displaced downwards, so that a portion of it was found immediately behind the umbilicus. A large subphrenic abscess was discovered behind the liver pushing up the posterior portion of the diaphragm. The pylorus and contiguous portion of the duodenum were sharply curved, and the lumen almost closed by external peritonitic bands.

In this case the abnormal condition was primarily due to the subphrenic abscess, which pressed the liver forward and downward, and at the same time caused it to turn on its axis. If a more determined effort had been made, the cause of the dislocation might have been found during life. The displacement of the liver here was not the primary condition, nor was it the most important feature, yet it illustrates one way in which that organ has been shown to assume an abnormal position.

CASE 3. M.T., æt. 17, admitted to Toronto General Hospital, November 20, 1894. The patient, a boy, was born in England, and lived some years in London, where he was employed as a messenger. Having suffered much from hardship and destitution, he applied to one of the orphanages, and was thus brought to Canada.

Nothing to be noted in the family history.

Patient stated that his health had always been good up to the commencement of the present trouble.

In the latter part of last July, while driving on a wagon loaded with stone, he fell off and the front wheel of the wagon passed over him. Ac-

according to the account given, the wheel passed obliquely across the body from left to right, fracturing the seventh and eighth ribs on the left side. He was carried home in an unconscious condition and placed under medical care. Dr. Aikins, who attended him, informed me that the shock was not severe, but that he complained of great pain and tenderness over the region of the liver, and that the abdomen was not much swollen. In three weeks he was able to go about, and came to Toronto. He still complained of pain, tenderness, and great swelling of the abdomen, and, as these conditions persisted, he was sent to the hospital.

He was of a peculiar dwarfed appearance, his body being longer in proportion than his legs. Rickety nodules were discovered on the ribs, and the abdomen was enormously distended.

On physical examination, a considerable amount of fluid was found in the peritoneal cavity. A large hard tumor was also discovered in the epigastric and left hypochondriac region. Patient complained of great tenderness over the tumor, and of severe pain, which passed upwards and downwards along the spine.

Digestion normal, with the exception of eructation of gas after meals. Appetite fairly good. The area of cardiac dullness seemed lessened, and the apex beat was found in the fourth interspace.

Patient was ordered to remain in bed, and the usual medicinal treatment for ascites—saline purgatives and diuretics—was prescribed. The fluid gradually disappeared, so that in January scarcely a trace of it could be discovered. A careful examination of the abdomen was then made, when the following conditions were found :

Palpation. The solid mass on the left side, already mentioned, extended four inches below the costal margin in the nipple line, and one and a half inches below in the anterior axillary line. A distinct notch could be felt in the edge of this body almost opposite the nipple line, and from this point the margin sloped upwards and inwards, so as to come about to the ensiform cartilage in the median line. There seemed to be an ill-defined body to the left of this mass. On percussion over the area of normal liver dullness a distinct resonance was present, except over a space about one inch in diameter, which extended a little beyond the right nipple. Slight dullness was also noticed between the ninth and eleventh ribs in the posterior axillary line. The stomach appeared to be above and to the left of the tumor. The colon was inflated, and found to pass in front of the lower portion of the hard mass.

The latter was diagnosed as liver :

- (1) On account of the notch and lower sharp margin, which could be distinctly made out.
- (2) The absence of dullness in the normal liver area.
- (3) The smooth upper surface.

The tumor was fairly fixed in its place. Tenderness was still felt a little below the lower margin, but the general pain and sensitiveness had entirely disappeared. The blood was examined and found normal. Urine also normal.

As the case was one of some interest a large number of physicians examined the patient, and, although there seemed little doubt about the nature of the tumor, it was difficult to understand the way in which such a displacement could have been produced.

We had no means of ascertaining the position of the liver before the accident.

Could such a change in position be produced by the wheel passing over the body if the liver had previously been in its proper position? It is, in my opinion, almost impossible that such a displacement could take place suddenly without producing injuries which would have immediately proved fatal.

Upon careful examination of the literature of the subject, I was unable to find any similar case. Two cases are described in which such a change of position was found, but in neither was the displacement produced by accident.

In one case published, a somewhat similar displacement was noticed along with ascites. The question at once arises, Was a correct diagnosis made? Dr. Wickham Legg's case presented a somewhat similar condition.

I have thus given my notes on this case exactly as I had written them previous to my last examination of the patient.

In the month of March he left the hospital, and took a position in a tannery, about one hundred miles from the city, where his work consisted principally in lifting hides out of vats, and carrying them a distance. This required a good deal of stooping. He was sent for, and an examination was made on May 24. The boy had enjoyed fair health, and seemed quite able to do his work. He complained of pain in the lower part of the dorsal region. The following conditions were noted:

A tumor was distinctly felt in the left hypochondrium, and in the lower part of the epigastric region, which presented the form, size, and consistency of the liver. The smooth upper surface, the anterior sharp border pointing downwards, and the notch could be made out. This tumor was quite movable, and changed its position at least to the extent of three inches when the patient, in the recumbent posture, moved from his left to his right side. Dullness over the greater part of the mass was absolute, and extended back to the spine. The dullness above and behind changed with the change of position of the tumor, proving that the latter extended back to the spine.

It will thus be seen that the tumor, which was previously fixed, was now quite movable, and the natural conclusion was that it was a transposed and movable liver, and this was strengthened by the fact that deglutition sounds could be heard more distinctly over the right seventh costal cartilage than over the same position on the left side.

Another change had, however, taken place. Whereas, during the winter, dullness was absent over the normal liver area, it was now present in a relative degree over a surface extending from within an inch of the right side of the sternum back to the spine. The upper margin of the dullness was on a level with the fifth rib in the nipple line, seventh interspace in the anterior axillary line, and ninth interspace in the posterior axillary line. The lower margin of the dull area did not extend further down than within an inch of the border of the ribs.

The edge of the liver could not be felt under the ribs on the right side.

How can these changes be explained? I am of opinion that the tumor which was diagnosed last winter as displaced liver was really a mass, perhaps inflammatory, attached and surrounding the spleen, and that the liver on the right side was displaced upwards and backwards, and so covered by distended intestines that it could not be made out by physical examination. The intestines were probably at that time attached to the costal margin by inflammatory adhesions, and the latter have since disappeared, leaving the liver still attached to the back part of the diaphragm.

Another possible explanation would be the pressure of a movable transposed liver in the left side, and the return of dullness to the right side might be due to a thickened pleura. Opposed to this, however, were the facts that the respiratory sounds could be heard over the dull area, and there was nothing in the patient's history after he left the hospital which would indicate a pleuritic attack.

The latter theory would necessitate the presence of a transposition of the abdominal viscera, when those in the thorax were in the normal position.

The history of this case rather strengthens the scepticism, such as Wickham Legg indulged in, as to the correctness of diagnosis in some of the recorded cases of displaced liver.

Etiology. Winkler gives the following causes which act one in succession to the other :

- (1) Pregnancy at full term.
- (2) Pendulous abdomen.
- (3) Hepar pendens.
- (4) Stretching of the ligaments.
- (5) Tearing and twisting of the suspensory ligaments.

Cantani was of opinion that in pregnancy the enlarged uterus pressed the liver backwards, thus forcibly elongating the ligaments, especially the suspensory. This has been disproved by Meissner. The effect of a pregnant uterus is to push the liver up to the diaphragm.

In order to more correctly appreciate the strength of the ligaments and the causes of displacement, Faure made a number of experiments, nineteen in all, upon the dead subject.

He found that it required from seventy to seventy-five pounds weight to produce rupture of the ligaments—twenty-five times the weight of the liver itself.

The conclusion that he arrived at was that there existed in some cases a morbid predisposition, a depraved state of the general nutrition, and that other agencies acted in a more direct way.

He also thinks that in some cases the ligaments may be morbidly lax, and that especially the inferior vena cava may be elongated.

It will be found by reference to the accompanying statistics that tight-lacing is put down as a probable cause in six out of fifty-five cases. Tight-lacing, as a general rule, when it affects the liver, produces a change in form rather than in position. It is easy to suppose, however, that in cases where there is a predisposition to displacement, tight-lacing might have a direct effect in pressing the viscus downwards.

In all displacements the importance of the integrity of the inferior vena cava must be considered. It is so fixed in the diaphragm that it is impossible to change its position suddenly.

One might suppose that in some cases, especially those of dilatation of the right ventricle, there is an unusual laxity of the inferior vena cava, and that the increased weight of the liver might produce some elongation.

This has, however, not been demonstrated on post-mortem examinations.

Among the active causes of displacement may be mentioned coughing, sneezing, vomiting, etc. One case is recorded in which the sneezing of hay asthma was supposed to be the cause. A sudden contraction of the diaphragm would tend to elongation of the ligaments, if the abdominal wall were lax.

Landau gives as a cause a rapid emaciation and disappearance of fat from the abdomen, and it is quite probable that the support thus given, when removed, might tend to falling of the liver. A lax, pendulous abdomen is mentioned in nineteen out of fifty-five females given in the appended list.

Glenard is of opinion that a slight displacement of the liver is present in the majority of women who have borne children. He found the lower margin as low down as the anterior superior spine of the ilium in three

out of forty such cases. The same author gives as a cause of hepatic displacement a general prolapse of the abdominal organs, especially the stomach and intestines. Although I do not attach so much importance to interoptosis as Glenard, I am still of opinion that the condition is frequently the cause of many obscure symptoms, and that it is often overlooked.

Violent efforts are given as the cause in four cases; all males. The remains of an old echinococcus cyst in the suspensory ligament is mentioned as a cause in one case. In one case, Richelot's, the adhesive bands resulting from an old hepatic inflammation drew the liver out of position. Carcinoma is given in one case.

Sex. Females, fifty-six. Males, fourteen. The proportion being about four to one.

Meissner's theory, supported by Leopold and Sutigen, supposed a congenitally abnormal length of the ligament meso-hepar. This has not been demonstrated.

Age.	Females.	Males.
1-10.....	0.....	2
10-20.....	1.....	2
20-30.....	7.....	1
30-40.....	16.....	2
40-50.....	14.....	4
50-60.....	9.....	1
60-70.....	5.....	1
Age not given.....	3.....	1

It will here be noticed that the condition came on later in life in females than in males. In only one female before the age of twenty. The relationship between frequent pregnancies and prolapsed liver is shown in the following table :

Patients.	Children at full term.	Premature deliveries.
2.....	0.....	0
1.....	0.....	1
2.....	1.....	1
3.....	2.....	0
1.....	2.....	2
1.....	2.....	4
4.....	3.....	0
4.....	4.....	0
2.....	5.....	0
2.....	6.....	and a number of abortions.
5.....	7.....	0
1.....	7.....	1
4.....	8.....	0
1.....	8.....	1
1.....	9.....	0
3.....	10.....	0
1.....	10.....	6
1.....	12.....	0
1.....	13.....	0

Thus twenty-one out of fifty-five had one hundred and sixty-eight children—an average of eight for each. In several cases the pregnancies followed very rapidly one upon the other.

Symptoms. A sudden onset was noticed in five of the recorded cases. The symptoms present were severe pain in abdomen, rapid and irregular pulse, and the usual symptoms of shock. These were followed by a feeling of weight and dragging in the abdomen, with more or less severe symptoms of dyspepsia.

In the great majority of cases the displacement came on gradually, and the symptoms noticed were a feeling of weight in the abdomen, and a dull pain, especially on exertion. In one of Chvostek's cases the pain was excessive. In several the general symptoms of neurasthenia were present, and in many those of dyspepsia. In some nausea and vomiting. Jaundice of a severe character occurred in five females and one male. Slight jaundice in four females and two males. In three or four cases dyspnoea and cyanosis were prominent symptoms.

The physical signs are as follows :

Presence in the abdomen of a tumor which can be readily felt, and which is of the size, shape, and consistence of the liver.

The tumor was found in the right abdominal region in forty-one females and eight males ; in the left abdominal region in one female and three males ; in the right and centre abdomen in three females and four males ; below the umbilicus in twenty-two females and four males. The lower margin extended below the umbilicus in twenty-two females and four males.

In Wickham Legg's case the tumor presented the form and shape of the liver, and on post-mortem examination it was found to be a matting together of the omentum.

Unless the walls of the abdomen are very thin, one might be mistaken by palpation alone.

The points in connection with the tumor are the smooth upper surface, sharp lower margin, and the presence of a notch.

One of the most important points is the possibility of replacing the liver. In the great majority of the cases given this could be done.

Tympanitic resonance over the normal area, which would change to dullness when the liver was replaced. The change of position of the liver upon change of posture of the patient ; in other words, mobility of the organ. This existed in a greater or less degree in many of the recorded cases.

Diagnosis. Floating liver has been mistaken for typhlitis, ovarian cyst, movable right kidney, and hydronephrosis. In two cases of supposed displacement, the tumor was the result of thickened omentum.

The principal points in diagnosis are : (1) The upper smooth surface, sharply defined anterior border and notch. (2) Tympanitic resonance over the normal area of liver dullness. (3) Possibility of partial or complete replacement when dullness is found in the normal area.

When all these conditions are present in the right abdomen, there is little difficulty in the diagnosis.

Cases of displacement have occurred where, owing to adhesions, it has been quite impossible to replace the liver.

The difficulty of diagnosis in some cases is well illustrated by the fact that in two laparotomies displaced liver was found when altogether different conditions were suspected—in one case a movable kidney with hydronephrosis, and in the other an ovarian cyst was thought to be present.

In the treatment of the cases recorded sixteen were relieved by abdominal support. In one case a bandage could not be worn, as it increased the pain and tenderness.

It is, of course, not possible to retain the liver in position, but it would appear that a support to the abdominal walls is in many cases sufficient to prevent further prolapse, and that the symptoms produced by the dragging of the liver on the diaphragm are thus relieved. Four operations are reported in the appended list.

Binnie's laparotomy. Recovery in three weeks.

Peters operated in a case of supposed hydronephrosis, when displaced liver was found.

Richelot fixed the liver to the abdominal walls. Recovery.

In three other cases of floating lobe of the liver fixation to the walls of the abdomen was successfully done by Billroth, Tscherning, and Gerard Marchant.

In the appended tabulated list of seventy cases all except ten or twelve cases have been taken from original papers. It will be noticed that in two or three instances the condition diagnosed was rather a change in form than in position, and they probably should be omitted. In three or four others the change of position was slight, and there were so few symptoms present that they should scarcely be placed in the list.

It is probable also that in some of the cases mistakes in diagnosis were made.

LIST OF RECORDED CASES OF DISPLACEMENT OF THE LIVER—MALES.

AUTHOR.	AGE.	FORMER HEALTH.	HISTORY AND PRESENT CONDITION.	TUMOR.	CAUSE.	THERAPEUTICS.	FUTURE COURSE.
Browne, Brit. Med. Journal, 1869, vi., p. 209.	Yth	Had a fall 16 months before.	Parents say that they noticed a tumor after the fall. Resonance in the liver region. No symptoms of hepatic trouble at time of fall.	Liver found in the epigastric region extending from 1½ inches below the ensiform cartilage to within 1¼ inches of umbilicus, 6 inches horizontally, 4¾ vertically, and 5 diagonally.			
Wassilieff, St. Petersburg Med. Wochen., 1876, xxx, p. i., "Faure."	31	Measles in infancy; at 6 violent fever; 4 years after severe exertion, violent pain in right hypochondriac region, and then noticed a tumor.	Complained of fullness in both hypochondriac regions. Moderate height, well developed, slight anemia. Nothing noticed in the chest. Abdomen much dilated.	Body, resembling the liver occupying the abdomen below the diaphragm on both sides.			
Wassilieff, St. Petersburg Med. Wochen., 1876, xxx, p. i., "Faure."	47	28 years before had severe abdominal pain; at 40 years had marked tumor in abdomen, which grew larger.	Came to hospital complaining of weight and pain in the abdomen; jaundice, which has existed for 2 years, now brownish yellow skin. Heart and lungs healthy. Marked swelling in right hypochondrium. Abdomen distended. Upper margin of liver in mammary line at sixth rib; axillary, seventh lower margin easily felt.	Liver lower border extends beyond the median line, is lost beneath the inferior border of the ribs. The liver can be pressed towards normal position; spleen displaced.			
Chvostek, Wiener Med. Blatt.		No history of accident or violence; was a physician.	Left end of liver, anterior border, felt arching down to the right, being in the middle line, 15 cent. below the xiphoid.	Tumor did not markedly descend on respiration; could be replaced when he was in the horizontal position. In right parasternal line the anterior border is 6½ cent. below the tip of the xiphoid. In left parasternal line 1 cent. below.			
Dobrzycki, Warsaw Journal.	28	Complains of pain in liver region for 3 years.	Tumor in lower part of abdomen. Could not move on account of weight and pain.	Replaceable when the patient was in recumbent posture with head lowered.			

AUTHOR.	AGE	FORMER HEALTH.	HISTORY AND PRESENT CONDITION.	TUMOR.	CAUSE.	THERAPEUTICS.	FUTURE COURSE.
Rubiniowitch, Voenno Med. J., St. Petersburg, 1884, 37-56. "Fauré."	42		Soldier; three years before admitted to hospital felt a pain in abdomen, and noticed a tumor. Tumor first size of an egg, grew larger; pain in abdomen increased. Well-developed bony and muscular systems. Cyanosis of face; respiration thoracic. Abdomen distended, especially on the right side, where one perceives a solid body, the size and shape of the liver. Surface round, not painful. Superior limit of liver dullness commences in the mammary line at the eighth rib, and at the axillary line at tenth rib. This is lowered by deep inspiration. Apex beat of heart in fifth intercostal space felt with difficulty. Difficult respiration, vertigo, engorgement of hands and when he began work.	Liver does not occupy its normal position; not in apposition with diaphragm, but displaced and turned upon its transverse and longitudinal axes. Right lobe is in immediate contact with abdominal wall by its superior surface. Posterior convex border is turned upwards. Left lobe is felt easily in the umbilical region.		Patient relieved from military service.	
Parker, N. Y. Inf. Med. Jour., 1889, p. 656.		Severe vomiting.	Child lost flesh rapidly. Cancer was diagnosed by some. First seen in 1886, at age of 3 months. Pain and loss of sleep.	Lower edge of the tumor a little above the pubes. Right side extends from ilium to nearly the axillary line. Left to middle line of abdomen; could be pressed upwards. Upper border reaches to the umbilicus. Absence of normal liver dullness.		Dietetic and bandaging.	No evidence of liver on left side. Child in same condition in 1888.
Szigethy, Pesth. Med. Chiv. Press Beuda Pesth, 1889, xxv, p. 1013. "Fauré."	42	Hard drinker and ascites.	Peasant. Dyspnea, and increase in size of abdomen. Well nourished; slight jaundice; respiration difficult. Lung sounds, clear and full. Heart sounds normal, slightly accentuated. Maximum circumference of abdomen, 110 cent. Tympanitic resonance in normal liver region. Ascites.	Tumor felt more to the left supra-umbilical region than on the right. After laxatives the liver changed its position. Inferior margin can be felt from the umbilicus to the left posterior axillary line. Above that the rounded surface is felt.	Perihepatitis.	Laxatives and treatment for ascites.	Improvement.
Einhorn, Med. Monatsch., 1889, vol. 1, 351-353. "Fauré."	57	Yellow fever in 1857. In 1889 patient was seized with rigors and vertigo, commenced to vomit, and had pain in abdomen and back.	In the epigastric region is an oval prominence, the lower border of which crosses the abdomen a finger-breadth below the umbilicus. When pressure is made on right upper abdomen respiratory movements are not noticed. Digestion, heart, and urine normal.	Tumor moves up and down with respiration. Dullness on percussion over the whole tumor, and extending upwards to within a finger-breadth of the thoracic wall. Tumor can be replaced. Doubtful as to whether the displaced liver is congenital or acquired.		Bandage.	Improvement marked; can work and walk easily.

AUTHOR	AGE	FORMER HEALTH.	HISTORY AND PRESENT CONDITION.	TUMOR.	CAUSE.	THERAPEUTICS.	FUTURE COURSE.
M a x. Mann, Deutsche Med. Wochen., 1890, xvi., 104.	43	Measles, scar- let fever; gen- eral health good; typhus in last campaign.	Soldier; 1886 had scurvy. In 1886 came to hos- pital again in the following condition: Tendancy to hemorrhage; thoracic viscera healthy; liver descends three finger-breadths below the margin of the false ribs. Was in hospital some months. 1887 had hemorrhages under the skin and from kidneys. In next August he noticed a tumor and saw sense of fullness and constriction in his abdomen, pains radiating to the thorax. In this month he comes to hospital again, emaciated. Skin has a lead color. Superior abdominal region presents tumefaction. Dullness corresponding with the in- ferior border of the liver. In 1888 left kidney is out of position. In 1889 fluid between the base of lung and diaphragm pushes the liver down. In September, 1889, spleen became movable. Died in April, 1890. Pulmonary edema and failure of heart's action.	Palpation. The inferior border of the tumor is made out to be the anterior border of the liver. At first diag- nosis of hypertrophied liver was made. Liver could be partially replaced. In one month left improved, and re- turned again in 1888. Dis- placement of liver more marked.			Post-mortem verified the results of physical examination.
Seluk, Russ. Medicina, St. Petersburg, 1890, vol. xvi., p. 474.	30		Small, anæmic, emaciated abdominal walls, Cardiac dullness increased. Accentuated aortic second sound. Liver displaced vertically and laterally. Left lobe was turned upwards. It oc- cupied the left and inferior portion of the abdomen; could not be made to change its position in any way. Tympanitic resonance over normal liver re- gion. Error in diagnosis could not be made, be- cause of thinness of abdominal walls.	Displacement of liver ex- isted, in all probability, since birth, and did not cause di- gestive trouble.			

AUTHOR.	AGE.	FORMER HEALTH.	HISTORY AND PRESENT CONDITION.	TUMOR.	CAUSE.	THERAPEUTICS.	FUTURE COURSE.
Kreider, Philadelphia Med. News, 1893, lxii., 436.	62	Heavy drinker until 18 years ago. Had sufficient pleura healthy; good appetite; no cough, pain, fever from gonorrhea and syphilis; no jaundice; spleen normal; left side of abdomen flaccid. No evidence of syphilis now. No interference with circulation of the latter present now. Some years ago the patient thought the liver had been loosened by lifting heavy casks of liquor. His health does not suffer.	A year ago noticed lump in his side. It had given rise to no symptoms. Heart, lungs, and pleura healthy; good appetite; no cough, pain, fever from gonorrhea and syphilis; no jaundice; spleen normal; left side of abdomen flaccid. No evidence of syphilis now. No interference with circulation of the latter present now. Some years ago the patient thought the liver had been loosened by lifting heavy casks of liquor. His health does not suffer.	Large tumor found when patient stood erect; more distinct when lying down on his back. The superior and anterior surfaces were smooth and convex lower edge plainly felt and notch easily made out. The hepatic dullness began $4\frac{1}{4}$ inches below the nipple and the nipple line and extended toward the ilium for $7\frac{1}{2}$ inches, and from the umbilicus for 11 inches toward the right side. The tumor (liver) moved slightly on change of posture. Movement of the liver caused no pain. By lowering the head and raising the hips the organ could be partially restored to its normal position, but not entirely. The organ is turned forwards upon its transverse axis, the superior surface is in contact with the anterior abdominal walls.	Accident and relaxation of suspensory ligament.	Bandage.	No symptoms up to date.
Leube, München. Med. Wochen., Jan. 23, 1894.	17	At 12 had rheumatism, dropsy of abdomen; tapped 3 or 4 times.	Abdomen distended; stomach tympanic; spleen not enlarged.	Upper surface smooth; pulsation outwards; portion between liver and diaphragm occupied by fluids.			Post-mortem. Liver not attached to abdominal walls; suspensory ligament $7\frac{1}{2}$ cent. long; left lateral ligament 4 cent. long.

FEMALES.

AUTHOR.	AGE	CHILDREN.	FORMER HEALTH.	HISTORY AND PRESENT CONDITION.	TUMOR.	CAUSE.	THERAPEUTICS.	FUTURE COURSE.
Laurent Heister, <i>Acta Physico-Medica, Naturæ Curiosorum, Nuremberg, 1754, x., p. 14.</i> Faure.					Liver displaced, the right lobe being downwards. Right lateral border extending as far as the anterior superior spinous process of the ileum. The left lobe in the right hypochondriac region.			Post-mortem appearances: The colon was found distended; the stomach small and hid den behind the convolutions of the colon; the liver in position already described.
Cantani, <i>Annali Univ. di Med. e. Chir., Ann. Univers. di Med., Milan, 1866, p. 373-392.</i>	54	Two. 1st at 27. 2nd at 43.	Puerperal peritonitis. Menstruation regular up to 50.	Mother died of dropsy, sister of carcinoma. Noticed a movable tumor in the abdomen since the birth of the last child. Hepatic dullness not present.	Replaceable to liver region, under surface of liver, and notch felt when replaced.	Tight lacing.	Bandage.	When seen 11 years later had enjoyed good health continuously.
Piatelli, <i>Rivista Clinica di Bologna, 1868, vii., p. 239.</i> Schmidts, <i>Jahrb., 1871, p. 107-114.</i>	56	Married at 19. Abortion in 3 months. 1 pregnancy normal.	Rheumatism at 23; chronic bronchitis at 45. Menstruation regular from 13 to 49 years.	Parents healthy. After onset of chronic peritonitis at 45 years of age, noticed tumor of abdomen. Circumference of abdomen, 139 c.m.; between navel and symphysis, circumference 97 c.m. Sensation of weight and fullness three months after last confinement. No liver dullness.	Not completely replaceable.	Tight lacing.	Neither pad nor cold douche were tolerated for any length of time.	Death from dropsy 13 years after the tumor was first noticed. No post-mortem.
Meissner, <i>Schmidts, Jahrb., Leipzig, 1869, p. 107-114.</i>	39½	1st at 28. 2nd at 30. 3rd at 39.		Pain in right side. No liver dullness.	Replaceable tumor with sharp anterior border. Internal lobular growth.	Tight lacing.	Wore a support of elastic cloth.	Good health for the next 8 years.
Barbarotta II Morgagni, <i>Schmidts, Jahrb., 1870, 149-170.</i>	37	Six.			Replaceable. Upper margin four finger widths from the margin of the ribs.	Last pregnancy and tight lacing.		
Vogel, <i>Sang. Menorrhæien Heilbr., 1872, xvii., 2.</i>	50	Three.	Menstruation ceased in the year the tumor appeared.	Woman thought she was pregnant. No pain in the right side. No hepatic dullness.	Tumor had a smooth surface.	Tight lacing. Very small waist.		No jaundice.

AUTHOR.	AGE	CHILDREN.	FORMER HEALTH.	HISTORY AND PRESENT CONDITION.	TUMOR.	CAUSE.	THERAPEUTICS.	FUTURE COURSE.
Winckler, Arch. f. Gyn., 1872, iv., 145-156.	29	1st at 23; 2nd at 29.	Always healthy.	Four weeks after last child was born felt a pain in the right side in carrying or lifting heavy weights or in standing. Very lax abdomen. No liver dullness.	Fully replaceable. Can feel the margin, which extends as low as the crest and anterior spine of the ilium.	Pendulous abdomen with both children.	After second child was born a support was worn. Two years later there was pain and jaundice. Banded for this.	Well up to 33 years.
Salomone Marino, Rivista Clin. di Bologna, 1874, In Th. Blat.	20			Tumor in lower half of abdomen, and spleen on the right side. Liver hypertrophied and prolapsed to left side.				
Leopold, Arch. f. Gynæcologie, Berlin, 1874-1875, vii., 152-168.	54	Seven. 4th at 29. 7th at 47.	Always good. Menstruation normal up to 50 years.	For last half-year pain in the right side. Abdomen very lax. One can scarcely palpate. No normal liver dullness. Mother died of dropsy.	Replaceable. Margin very distinct.	Pendulous abdomen and tight lacing.	Support.	Good health.
Chvostek, France Médicale, 1875, p. 837; Med. Times and Gazette, 1876, 101; Militararzt, Dec., 1876.		Twelve.	Good.	Diagnosis of carcinoma had been made before coming to the notice of Chvostek. Pains in abdomen from stretching of nerves. Cachexia, icterus. Resonance over the normal liver region.	Replaceable; lower border reaches the pubes, and presents a notch. Movable to the extent of one or two quaternaries inches without change of position of patient.	Weakened ligaments through frequent pregnancies.		
Templini, Gaz. Medica. Ital., 1875, "Faure."	60	Eight children and one abortion.	In 1862 had acute rheumatism, followed by cardiac lesions.	Lately noticed a tumor in the abdomen. On examination increased precordial dullness and tympanitic resonance in normal liver region was discovered.	Tumor made up of two lobes. Movable under the skin, partly in the epigastric and partly in the umbilical region. The right is the larger, and separated from the left by a notch. Right margin rounded; the left sharp and elongated. In the right lateral decubitus the tumor is easily moved from right to left. In left decubitus no displacement.			
Sutugin, Arch. f. Gynæk., Berlin, 1875, viii., 531-533.	41	1st, normal. 2nd, abort. at three years before. 3 months.	Rheumatism in the feet three years before.	Six months before pain in the abdomen began, suspensory ligament easily felt. Pain in walking. Pale, fat, and anæmic.	Partially replaceable. Absence of liver dullness.	Weakness of abdominal walls.		

AUTHOR.	AGE	CHILDREN.	FORMER HEALTH.	HISTORY AND PRESENT CONDITION.	TUMOR.	CAUSE.	THERAPEUTICS.	FUTURE COURSE.
Wassilieff, St. Petersburg, Med. ic'n. Wochens., 1876, No. xxx., p. 1, "Faure."	39	16 pregnancies; six were a abortions.	After first two children were born patient had orthragia, which weakened her very much. In infancy had measles; at 15, a fever; at 23, diphtheria; at 37 some severe febrile disease.	Badly nourished; appears older than she is; bones and muscles poorly developed; abdomen pendulous; uterus movable in all directions; polypus as large as an almond is found outside the os. Patient's weight is 40 kilos. S. G. of urine is 1016; no abnormality.	On the right side of the abdomen below the false ribs a tumor resembling the liver is found. This can easily be pushed upwards to normal position of the liver.			
Wm. Pepper, M.D., Med. and Surg. Reporter, Phila., 1877, t. xxxvii., p. 350.	41	Seven.	Health good until birth of 3rd child; appetite good; bowels constipated.	General health of the patient good. After birth of the 3rd child she resumed her work five days after confinement. One hour afterwards she had pain in lumbar region radiating to the epigastric region. Flatulence; eructation; distension with gas; slight jaundice; walls of abdomen lax; rest eases the pain.	Liver situated across the abdomen, the lower margin on a level with the anterior superior spine of the ilium. Liver is not increased in size; resonance in the normal liver region.	Stretching of suspensory ligament.		
Henri Rodewitch, St. Petersburg Med. Wochens., t. iv., 1879, p. 324.	18	One child.	Heart and lungs sound; some vagina. catarrh; menstruation began at 19.		A tumor extending across the abdomen on a level with the umbilicus, difficult to define on account of the distention of the abdominal walls.	Pendulous abdomen.	Bandage.	Improvement.
Garnett, Am. Journ. Med. Sciences, 1881, xxxi., 110-115.	50	Several.	Always good.	Says she felt something give way on stooping. Pain across abdomen and chest, difficult respiration, sense of suffocation, fullness and sense of distension on right side of the abdomen. Nausea, pain, and faintness on walking.	Normal liver dullness absent, but dullness was marked from right crest of the ilium to the umbilicus. Tumor not easily made out.	No vibration. Was not palpating when the accident occurred.	Local application of hot flannel saturated with muriate of ammonia solution. Enemata.	Reduction and return of liver to normal position in three days. Recovery.
Trush, Obst. Gazete, Cincinnati, 1882, v. 337-343.	68	Several.		Seven months previously she noticed a hard tumor in her abdomen; slight jaundice. Had several falls from a ladder. Recently she has had sharp pains in her right side and epigastric region.	The tumor is situated on the right side of the abdominal cavity, and extends only to within 2 inches of the median line. It is oval in shape, and presents one extremity much			Post-mortem. On section the liver presented itself, situated mostly beneath the ribs. In its descent it made a quarter

of a turn on its transverse axis. Its upper convex surface was in apposition with the anterior wall of the abdomen. The liver was larger than normal, firm in consistence, and absolutely hard in region of gall-bladder. There were in a group two or three peripheral nodules of a whitish yellow color. The gall-bladder is distended, not much enlarged. Its contents are thick and whitish. In the cystic duct and common bile duct were three great biliary calculi. The pylorus and head of the pancreas were surrounded by an abnormal tissue, hard, and of fibrous appearance. A similar mass extends across the abdomen on a level with the umbilicus. The smaller portion is covered by the left lobe of the liver. The splenic portion is merely visible, and was the part made out on palpation. The diaphragm is drawn down and the suspensory ligament elongated. It proved to be carcinoma.

smaller than the other. Greater diameter is nearly transverse, a little oblique from right to left and from top to bottom. The lower margin is clearly defined, raised, and seems void of pelvic attachments. On the outer side of the lower margin is a slightly curved portion with convexity downwards, and to the left. A small pyriform body, which seems implanted in the principal tumor, shows itself at the inferior border. In left hypochondriac region there is a second tumor, smaller, hard, and nodular, sensitive to the touch. The larger tumor is movable, especially in the right hypochondriac region.

Surface of tumor is smooth and convex. At inferior border of thorax liver is not felt. Tumor not movable during respiration. Over tumor completely dull. Tympanitic resonance in all other abdominal regions.

In eleventh year was treated with cod-liver oil for threatened phthisis. Confinement easy, except two, when there were transverse present ations. At 28 noticed a sharp pain on turning a heavy substance. Since last pregnancy, in 1872, has had oedema and jaundice. Menstruation regular after 16 years of age, every 3 weeks.

Patient is small and moderately well nourished. Vertebral column deformity deviates to the left. In front thorax is normal. Lungs normal, except modifications, result of deformity. Heart normal. Abdomen very prominent. Walls thin and relaxed. Marked prominence exists below the umbilicus.

Seven.
Last seven years ago.

50
Carl Jacobi
Muller, Berlin
Klin. Wochens.,
1882, xix., p. 230.

AUTHOR.	AGE	CHILDREN.	FORMER HEALTH.	HISTORY AND PRESENT CONDITION.	TUMOR.	CAUSE.	THERAPEUTICS.	FUTURE COURSE.
Symanowsky, Edward, Kili Gatz, St. Petersburg, 1882, t. ii., p. 65-81. Fa re.	53	Thirteen.	At age of 14, he had jaundice, the cause not known. At 21, after mother's death, he had pains in her right side and heart trouble. This did not last long. Menstruation normal.	Pale. Complained of pain and a tumor in the abdomen five months ago. She dates her sickness from that time. Tumor was noticed under the false ribs. It became painful at times, mostly after meals. Heart's action was interfered with. The tumor above was becoming yellow. No appetite, constipation and emaciation. Muscles flabby. The right hypochondriac region is full and tense in volume, 68 to the minute. Respiration, thoracic. Temperature, 37°C. Cavity in right lung.	A hard tumor is found in the upper part of the abdomen. Movable. In an upright position, two fingers' breadth above the pubes, a clear fluctuation is found. The tumor above extends from the false ribs on the right side to the line of the umbilicus. The anterior border is hard and even. The notch easily felt, also the gall-bladder is felt hard to the touch. It is on a level with the umbilicus, and a little to the right.	Lax and long ligaments. Contraction of cicatrices.		The post-mortem. The liver is small and displaced, the inferior border reaches the umbilicus. Length is 23.5 cent., breadth 14 cent., depth 7 cent. Ligaments are long. Large cicatrices on superior surface. Gall-bladder is larger than a goose-egg. Near the cystic duct is a calculus as big as a hazel nut. The gall-bladder is filled with an aqueous liquid. Cystic duct obstructed.
Symanowsky, Loc. cit. Faure.	40	None.	At age of 14, he had jaundice, the cause not known. At 21, after mother's death, he had pains in her right side and heart trouble. This did not last long. Menstruation normal.	For some time has complained of frequent pain in right side, more intense on walking or in stooping at her work, being a tailorress. Lying down relieved this in an hour or two. Two years ago noticed abdomen larger, and a hard tumor. Appetite good. No constipation nor oedema of the legs. Sclerotics yellow.	Tumor noticed as a prominence in the right upper part of the abdomen. Extends as low as the umbilical line. It is hard, and terminates by a free border. Slightly movable to right and left, low, and immovable above, as it prevented by a free thing. The inferior part of abdomen is distended. No liquid nor tumor in this locality. Sclerotic region tympanitic. On lying down the projection is less, but the borders more prominent. Liver dullness absent in normal position. The organ is displaced downwards.	Repeated inflammation followed by cicatricial contraction.	Bandage.	Bandage well borne. Has worn it for 10 months and has become stronger. Gained 14 lbs. in weight.
Theodore Schott, Deutsche Med. Zeitg., Berlin, 1882, iii., 247; 259. Faure.	39	Seven normal, pendulous abdominal men during pregnancy.	Jaundice at 5 or 6 years. Menstruation began in 15th year.	During last two months of last pregnancy the abdomen was so pendulous that a bandage had to be used. (Edema of the legs at the times. Constipation. After last confinement became fleshy. Had vomiting from time to time, but this did not affect her general health. In 1879, when child was clearly made out. Inferior	Tumor in right hypochondriac region hard and in pendulous border on a level with the umbilicus. The tumor can be traced from 5 centimetres to the left of the median line to the right iliac crest. Superior surface not clearly made out. Inferior			

G. A. Peters, 27 Med. Gazet t e, 1882, p. 412.	Good. Married 4½ years.	nearly two years old, she came with symptoms of chronic catarrh of stomach. Abdominal walls thin. Pyloric region sensitive to pressure. Tenderness in right hypochondriac region.	Pregnant six months after marriage. Fell four feet, striking the right side of abdomen against a prominent object. Nausea and vomiting. Blood from the vagina. Attacks of pain.	Movable from side to side. Tympanites over part of the tumor. Lateral diameter, 6½ inches; perpendicular, 4½ inches.	Operation for supposed hydro-nephrosis; found to be displaced liver.	Long diameter of the liver extended from above downwards, right lobe lowest down on a level with the anterior superior spinous process. Stomach vertical.
Maach, Centralblatt f. Chirg., 1885, 63, No. iv., 1885.	Eleven years before had suffered from echinococcus.	Pain in the right side coming on for eleven years. General nervous symptoms.		Two in the right iliac fossa. Sharp in contour, and about the size of the liver. Resplacable. Hepatic dullness absent.	Bandage.	Comfortable.
Kispert, Berlin, Klin. Wochens., 1884, xxi., 372-375. Faure.	Two children; four abortions. Suffered at first child, 9 years ago; stricture began in child, 6 years ago; at 16; regular up to 20. Now irregular and scanty. 2 years ago.	Seven years ago suffered from pains in gastric region and in the lower part of the abdomen. Complained of a sensation of weight in right side. Could not lie on the left. For two years has noticed a tumor, painful and constant. Eructations, stools normal, skin and sclerotics slightly yellow. Anemic heart murmur. No normal liver dullness.		Tumor found in epigastric region. Roundish or oval. A large tumor is found in the hypogastric region of an elliptical form. These two are continuous as an hour glass in form. Consistence, compact. Transverse diameter of spheroidal is 6 cent., that of the inferior margin 12 cent., below umbilicus. Movable in the right hypochondriac region, but not at the lower part, also easily movable from right to left. To the right of the tumor the ascending colon is made out. Transverse colon runs below the tumor.		
Seager, Brit. Med. Journal, 1888, Vol. 2, p. 599.	Had been under treatment for some time for flatulency, ascites, and chronic bronchitis.	Two or three days previously noticed a hard swelling in the abdomen. This was diagnosed to be large nodular liver. No pain nor tenderness except about the lower right ribs. Normal liver dullness absent. Dr. S. does not know when displacement occurred.		Anterior border of the liver is in the right inguinal region. Upper surface of right lobe in the right lumbar and umbilical regions, left lobe projected below the ribs. Could be replaced by hands.		Tenderness over the gall bladder and jaundice. Bad appetite and wasting.

AUTHOR.	AGE	CHILDREN.	FORMER HEALTH.	HISTORY AND PRESENT CONDITION.	TUMOR.	CAUSE.	THERAPEUTICS.	FUTURE COURSE.
Landau, Die Wanderleber und de Hange- baucher Frauen, Berlin, 1885.	35	Four chil- dren in 7 years.	Ill since last confinement, 3½ years ago. Re- section of cervix uteri 2 years ago.	If strong pressure is made on the liver, pain is felt in the 3rd line of abdomen, very sensi- ble to pressure. In dorsal decubitus liver dullness reaches as high as the upper margin of seventh rib in the parasternal line, in mammary line at inferior bor- der of seventh rib, and in axillary line at upper border of eighth rib.	Liver is felt in the median line of abdomen, very sensi- ble to pressure. In dorsal decubitus liver dullness reaches as high as the upper margin of seventh rib in the parasternal line, in mammary line at inferior bor- der of seventh rib, and in axillary line at upper border of eighth rib.		Several weeks' rest and nourish- ment.	Displacement of the liver is much diminished during the latter months.
Landau, Loc. cit.	24	7th months' fetus seven years ago.	Pendulous ab- domen since mis- carriage. In 1880 she had ca- vity, syncope, vomiting, rise of tardial endome- tritis. Lumbar pains relieved by rest.	Suddenly after lifting a heavy weight the patient had severe symptoms resembling peritonitis, viz., syncope, vomiting, rise of temperature, and tenderness on palpation. After tenderness and swelling diminished a tumor could be distinctly felt. Jaundice was present, and persisted for many weeks.	At time of attack, 1880, difference of opinion expressed as to nature of the tumor. After the attack, and in 1883, there were more conclusive evidences of displaced liver.			
Landau, Loc. cit.	28	4 pregnan- cies in 3 yrs., 2 at term, and 2 before term.	For last three months menses not regular. Strong and mus- cular woman; healthy appear- ance.	Uterus prolapsed and retro- verted.	Tumor felt in the right half of the abdomen with smooth surface, not easily movable, extending from above down- wards and from right to left. Inferior surface and hilus of the liver easily palpated. The latter looks more to the right than downwards. In the hori- zontal position the abdomen is flattened and the liver moves upwards.			
Landau, Loc. cit.	30	None.	Ordinary health without organic disease; suffered from hay asthma each year for last 3 years.	In 1884 complained of violent pain in right side of abdomen; these had been present for six months; abdomen wall distended.	Liver fills right half of the abdomen, extending 3 cent. below anterior superior iliac spine of the right side; pal- pation easy; tympanitic note in normal liver region.	Obscure Possibly vio- lent sneezing during at- tacks of hay asthma.		

Landau, Die Wanderleber und de Hangebauch der Frauen, Berlin, 1885.	Eight.	Shortly after birth of 5th child] was subject to great fatigue and weight in the abdomen. Had pain in epigastric region, became asthmatic. Moderate walking or work would cause fatigue. After 6th child physician attending noticed a tumor. Three births during Dr. Landau's observations.	Large abdominal hernia on the right side, which renders palpation of the abdomen very easy. Tumor distinctly felt in the right abdomen, the shape and size of which indicate to be the liver. It is lowered, the right lobe more than the left, and retroverted so that the inferior surface looks almost vertically upwards. The lobus quadratus could be distinctly felt. The gall-bladder only imperfectly felt. The liver could be made to assume its normal position.	Excessive fatigue from frequent child bearing and umbilical hernia.	
Landau, Loc. cit.	36	5 children during 11 years.	After 5th child retroflexion of uterus, pendulous abdomen.	In August, 1883, during 6th pregnancy the trouble began. In February transverse position of the fetus was easily made out, child born dead in April, complained of lassitude, cramps in the stomach and profuse hemorrhages during menstruation. Displacement of liver could then be easily made out and could be replaced. Pain in right side of chest and abdomen.	Very remarkable amelioration.
Landau, Loc. cit.	39	In 11 years 7 children born at term.	For many years suffered from a movable liver. It was lowered. When patient stands erect its inferior border nearly reaches the ilium.	Abdominal hernia which allows the contents of the abdomen to be distinctly felt.	Pessary and bandage.
Landau, Loc. cit.	26	Two—both at term.	Last 3 years had uterine hemorrhage and pains in right side of abdomen. Never wore corsets.	Liver entirely on right side. On percussion slightly tympanitic note in the parasternal line up to the median line, and then the note is strongly tympanitic.	Very much improved.
Landau, Loc. cit.	43	8 children in 17 years, at term.		Tumor, which is the liver of normal size, surface smooth, descends as low as crest of the ilium, and is easily reduced.	Bandaged a metallic plate in front.

Great improvement, especially of uterine hemorrhages.

AUTHOR.	AGE	CHILDREN.	FORMER HEALTH.	HISTORY AND PRESENT CONDITION.	TUMOR.	CAUSE.	THERAPEUTICS.	FUTURE COURSE.
Landau, Loc. cit.	60	4 children.	Prolapse of uterus. Total inversion of the vagina.	Pains in right superior abdomen. Liver is movable, and not hypertrophied.	In recumbent position, absolute liver dullness commences in the parasternal line at inferior border of 7th rib, in mammary line at same point in axillary line inferior border of 8th rib. The notch looks towards the right.		Round pessary for prolapse.	Improvement marked.
Landau, Loc. cit.	34	Ten pregnancies, 7 at term.			Liver displaced downwards, not hypertrophied. Tympanites in right sternal and parasternal lines. This is due to intestines. Diaphragm lowered. Liver displaced backwards, and felt in the right iliac region.			
Landau, Loc. cit.	30	Six, "born at term.	For last year had prolapse of the uterus.	Pains in lumbar region. Lassitude and vaginal pains in the abdomen.	Liver displaced, but not to a great extent.			
Landau, Loc. cit.	36	Four.						
Landau, Loc. cit.	56	Four.						
Landau, Loc. cit.	30	Five.						
Landau, Loc. cit.	32	Ten.						
Von Hacker, Biltroff's Clinic, Centralblatt f. Chir., 1886, 493.				Noticed a tumor in the upper abdomen on the right side for five months. Fever, vomiting, weakness, emaciation, and severe pain in the back and sternum.				
P. Müller, Deutsch. Arch. f. Clin. Med., xiv. 1, 46.	57		As a child, good. Menstruation ceased at 52. Commenced late.	Since cessation of menses, gradual emaciation and swelling of abdomen. No liver dullness. Two tumors noticeable.	Upper tumor large, and has a sharp anterior border. Notch distinctly felt. Liver replaceable. Tumor below springs from the pelvis.		Several tapings.	Liver in normal position; felt with difficulty; atrophied and covered by the stomach and duodenum. Tumor, thickened omentum.

43	Rosenkranz, Zur Casuistik der Wanderverleber, Berliner Klinisch Wochen., Sept. 19, 1887, Faure.	Eight por- mal confine- ments.	In middle of February seized with violent vomiting; pain in epigastric region; developed in- tense ascites and anasarca of in- ferior extremities and abdominal walls without cardiac lesions or albuminuria. (Edema disappeared under treatment with diuretics and purgatives. Five weeks later re- currence of ascites.	Liver was found displaced in the abdominal cavity, and movable in all directions.	
66	Rohden, Deut- sche. Med. Wo- chen., 1887, P. 106. Faure.	3 at term. Healthy women.	Nine and a half years ago noticed a sensation of weight in the abdomen; says she noticed a tumor which she could push up- wards; complains of pain, which is greater in the dorsal decubitus than in standing; diminished when patient lies on the abdomen; no jaundice.	Liver easily felt when pa- tient is in the upright posi- tion. Anterior border Notch and suspensory liga- ment could be felt. Tympan- itic note in normal liver re- gion. In dorsal decubitus liver easily restored to its normal position.	
32	Terrier et Bau- doun, Progres Médicale, Paris, 1888, pp. 121-3. Faure.	3 at term. Has had di- gestive trouble and constipation. Menstruation regular; com- menced at 17; has severe pains during the pe- riod.	In January, 1888, patient suf- fered from severe pains in the abdomen, chiefly in right iliac and hypochondriac regions; re- covery after nine days; four weeks after seized with intense pain. Had afterwards intermit- tent attacks of pain. These were thought to be due to displaced kidney. Abdomen distended; no urinary trouble. Diagnosed as floating kidney.	In the right hypochondriac region, and near the umbil- cus, there is a tumor. It commences a finger breadth below the right false ribs, and descends to the right iliac region; extremely movable; no ascites.	Operated on May 8th. Tu- mor was found to be a lobe of the liver, much en- larged, which de- scended to the umbilicus and right iliac fossa, hard and scle- ratised, no irregu- larities or cysts on the surface. Enormous calcu- lus found in the gall-bladder. Gall-bladder stitched to the abdominal wall.
42	Hughes, Univ. Med. Mag., Vol. ii., 1889-90.	Nine.	Tumor noticed at time of last confinement, and afterwards. He- patic dullness partially reappeared when liver was replaced.	Tumor on right side of ab- domen, reaching from the crest of the ilium to margin of the ribs; surface smooth and notch felt. Replaceable partly. Hepatic dullness ab- sent.	Support. Pendulous abdomen. Very comfortable.

AUTHOR.	AGE	CHILDREN.	FORMER HEALTH.	HISTORY AND PRESENT CONDITION.	TUMOR.	CAUSE.	THERAPEUTICS.	FUTURE COURSE.
Curtius, Halle 1889.	41		Never ill, except frequent eructations and rapid beating of the heart. For seven years some dyspepsia. In 1887 patient was occupied putting out clothes on a line; was not able to wear corsets, but has since that time had an abdominal support.	Present disease commenced gradually—lassitude, feebleness, and rapid beating of the heart. In 1887 patient was occupied putting out clothes on a line; was not able to wear corsets, but has since that time had an abdominal support. Pains were sometimes sudden. In 1888, small, poorly nourished; weight, 43 kilos. Muscular system relaxed.	In 1887 patient noticed a hard tumor in right side, not causing pain, but a disagreeable sensation from pressure. May, 1888, standing or walking brought on pain and dyspnoea. On palpation a tumor is found extending from false rib to pelvis; surface smooth, consistence solid. Tumor very movable; pushed to normal liver region easily. More difficult to displace it towards the left.			Patient afterwards suffered from ascites and dyspnoea.
R. Pichevin, Progres Médical, 1888, p. 253.	50			Liver not increased in size below the ribs in the axillary line (resonance in normal liver region). A tumor occupying right side of the abdomen was found.	The tumor was convex, smooth; longer from above downwards than transversely. Mobility increased.			Died of tuberculosis. Post-mortem shows a floating liver lobe in the right iliac flank. It was 20 centimetres long by 20 centimetres. On raising the lobe there is a movable kidney seen, the extremity of which extended lower than the floating lobe.
Louis Frank, Am. Pract. and News, 1891, 3. Gerhardt's Clinic.	58		Inflammation of lungs and an attack of jaundice.	Liver displaced downwards and sideways; six years in this position. Blood flow never interrupted.	Large, uneven tumor. Moves with respiration.			
Binnie, Intern. Journ. Surgery, 1892, p. 232.	47	Unmarried.	Fell on right side many years before. Never noticed tightness. Dyspepsia. First noticed three years and jaundice six months before.	Pain in right side of abdomen and right shoulder. Countenance pale, with yellow tinge.	Tumor at level of the umbilicus, in the mammary line. Dullness over the tumor.		Laparotomy. Liver freely movable and displaced. Right extremity inferior. Upper surface to the right and anterior suspensory ligament elongated. Carcinomatous nodules discovered.	Recovery from operation in two or three weeks.

	Ten.	Farmer's widow. Had influenza, bronchitis, and asthma.	Feeling of weight in abdomen, and normal liver dullness absent.		Bandage.	Comfortable.
J. Bucholz, 54 Norsk. Mag. f. Lægevidenskaben, Oct., 1893.						
Munde, International Clinics, 2nd series, Vol. iv., 1893, p. 330.	45 E i g h t . Last 8 years ago.	Emphysema. Moderate for one or two years. Bronchitis. Menstruation ceased at 50.	Movable kidney was diagnosed.	Tumor on right side has a sharp, well-defined edge. Both palpation and percussion indicated it to be liver.	Lax abdominal walls.	Bandage and pad.
Richelot, Med. Times and Circular, July 26, 1893.	28		Patient had frequent attacks of vomiting. Had to give up work.	Floating tumor felt in the right iliac fossa. Typhlitis suspected.	Abdomen opened, liver replaced and fixed.	Recovery
Graham, 1895.	60 Ten.		Complained of increasing distension, especially on exertion. Attacks of bronchitis, dilated right heart, dyspnoea and cyanosis on exertion, oedema of limbs at times. Feeling of weight in abdomen.	Liver enlarged, and lower margin could be distinctly felt $1\frac{1}{2}$ to 2 inches below the umbilicus. Notch easily felt. Could be partially replaced when patient was in the horizontal position. Liver dullness commenced in mammary line at 7th rib.	Lax abdominal walls.	Bandage.
						Health much improved by bandage. Dyspnoea and cyanosis very much lessened.

REPORT OF ONE HUNDRED AND FORTY-FIVE OPERATIONS DONE FOR REMOVAL OF OVARIAN TUMORS AND PATHOLOGICAL CONDITIONS ASSOCIATED WITH THE OVARIES AND UTERINE APPENDAGES ONLY.*

BY A. VANDER VEER, M.D.,

Professor of Didactic, Abdominal, and Clinical Surgery,
ALBANY, N.Y.

(Concluded).

CASE 117. Mrs. R.C. Family history of dropsy, phthisis, and paralysis. Patient always healthy. Menstruated at fourteen; regular until 1888. Married twenty-five years. Six children, youngest sixteen years of age; no miscarriages. First noticed abdominal enlargement September 1, 1893; not attended with pain until four or five weeks previous to operation.

Cœliotomy, before class, November 2, 1893. Twelve quarts yellowish fluid removed from abdominal cavity, which was found studded with tubercles. Glass drainage. Good recovery. Discharged nineteenth day.

CASE 118. Mrs. E. McC. Patient healthy, with the exception of having what she says was progressive muscular atrophy when 17. Menstruated at fourteen; always regular. Married at fourteen; never had any children, but miscarriage when fifteen. In February, 1892, first noticed feeling of weight and oppression in left side abdomen and back. Sewed a good deal with sewing-machine; always worse afterwards. April, 1892, fell off stoop, struck on left side, and felt worse since. November, 1892, began to flow every two or three weeks. Since April, 1893, has been regular. August, 1892, confined to bed for a time, and occasionally since. Cœliotomy, November 16, 1893. Both ovaries adherent, left one especially; removed first. Right cystic also removed. Firm adhesions. Glass drainage introduced. Drainage removed after twenty-four hours. Recovery. Discharged December 30, 1893.

CASE 119. Miss K. Diagnosis, old general and pelvic peritonitis-dysmenorrhœa-hystero-epilepsy. Diagnosis confirmed at operation, November 29, 1893, private house. Left ovary and tube could not be found. Removal of ovary and tube right side like small intestine. Very much better for six months after operation. Since then occasional convulsions. Not so severe, however. Has had an occasional flow. Many and very firm adhesions. Recovery.

CASE 120. Mrs. H.W., family history good. Eight children; one miscarriage, July, 1892. Patient always healthy, with exception of serious illness at thirteen. Menstruated at that time, always regular. Since miscarriage pain in left side abdomen. May, 1893, had inflammation of kidneys. Œdema in ankles at times. Cœliotomy, November 30, 1893. Left ovary cystic, removed first. Right cirrhotic, also removed. No drainage. Good recovery. Discharged twenty-second day. Excellent health eight months later.

CASE 121. Miss E.L.H., family history good. Patient always delicate. Menstruated at fifteen; regular. In 1890 noticed enlargement of abdomen, thinks first apparent right side. Enlarged slowly but steadily since—no pain—sore when she walked far, and feeling of being tired. Cœliotomy, December 7, 1893. Large ovarian cyst attached left ovary, contained twenty pints fluid; cyst, when removed, weighed fifteen ounces. Right ovary atrophied, also removed. No drainage. Good recovery. Discharged January 23, 1894.

CASE 122. Miss S., invalid for past three years, unable to get about her household duties, confined to room a good share of time. Menstruation at times very painful, quite free, much leucorrhœal trouble, and bladder irritation. Diagnosis, double pyosalpinx. Cœliotomy, December 7, 1893. Tubes very much thickened, full of pus, ovarian abscess on left side (right side tube double), ovary adherent to small fibroid situated in posterior wall of uterus. Latter not disturbed. Excellent recovery.

CASE 123. Mrs. E.M.C., family history good. Patient in fairly good health, though suffering much from pelvic pains at different times. Two months previous to operation suffered severe pelvic peritonitis, with undoubted salpingitis. Diagnosis, double pyosalpinx, with adhesions. Patient emaciated and weakened. Cœliotomy, December 15, 1893, 11 a.m. Left ovary very adherent to surrounding structures; liberated with great difficulty. Trendelenberg position. Considerable hæmorrhage. Right ovary very adherent. Appendages thoroughly removed. Bleeding points controlled with one exception, down on right side, where it seemed impossible to place ligature. Long artery forceps placed and left in position. Cavity abdomen thoroughly flushed with saline solution. Glass drainage; tampons of iodoform gauze inserted around tube and forceps. Operation

eighty minutes. Took anæsthetics nicely, but none for last half-hour. Did not rally, dying from shock at 10.50. Post-mortem on day of operation. Impossible to have lessened this operation in any way. It was either to have abandoned it in beginning, or to go on and complete, and result proved it too much for her strength.

CASE 124. Mrs. M.S., æt. 71. Family history, tuberculosis, paralysis, and cancer. Menstruation not painful, but irregular; passed menopause safely at 51. January, 1893, had a severe attack of grippe; November, 1893, first noticed abdominal enlargement and pain, particularly in left side. Increased somewhat rapidly. Œdema of lower extremities during summer of 1893. Tapped four times by family physician, Dr. A. W. Van Slyke, and once, in consultation with myself, about December 1, 1893. Diagnosis of multilocular ovarian cyst, an operation advised, although patient was emaciated and weak. Coeliotomy on December 18, 1893. Large multilocular cyst, right ovary. Thirty-two pints fluid removed. Obligated to break down one cyst within another before removal of sac. Adhesions not numerous. Weight of cyst trifle over three pounds. Glass drainage. Patient did not rally from operation, and died suddenly at 4.15 a.m., December 19, 1893, from symptoms of pulmonary infarction. This case would have stood a very much better chance for recovery had the operation been done immediately after first tapping.

CASE 125. Mrs. P.S. Family history phthisis. Patient well as a girl. Menstruated at thirteen, never regular, often twice a month; 1891 suffered from pain in right side of abdomen. Attacks lasted half an hour. Physician diagnosed biliary colic. March, 1893, after attack, noticed enlargement of abdomen; never painful. No history of being jaundiced. Operation, December 21, 1893. Small ovarian cyst in right ovary; tapped and removed; few adhesions. Left ovary cystic and removed. Small cyst in left ovary ruptured when attempting removal of ovary. No drainage. Rallied nicely; some nausea. Bowels moved second day. Recovery uneventful.

CASE 126. Miss H.V., æt. 19. Family history good. First noticed enlargement on left side of abdomen, August, 1893, accompanied with much pain. Tumor increased rapidly. Coeliotomy, January 2, 1894. Large multilocular cyst in left ovary, containing eleven quarts fluid, thick, viscid, dark-colored. Firm adhesions, from left side of abdomen, with some coils on small intestines. Right ovary in condition cystic enlargement; removed with tube. Glass drainage; removed second day. Recovery very rapid. Patient very home-sick, and allowed to return on tenth day. Returned to hospital, May 15, 1894, with marked growth on left side of pelvis, probably nature sarcoma. Patient very much emaciated. No further operation advised.

CASE 127. Mrs. E.F.S. Family history good. Mother of two children. After birth of second child, 1886, patient had severe pain in lower part of abdomen; greatly increased when nursing child. Ulceration of uterus treated daily, but never cured. Irregular flow; bearing-down pains; could not walk; lacerated cervix repaired on February 10, 1893; improved. This operation was followed six weeks later by a pelvic abscess, which discharged through rectum. Pain in right ovary continued. Coeliotomy, February 22, 1894. Removal of uterine appendages; many firm adhesions. Glass drainage. Uneventful recovery; discharged on twenty-sixth day.

CASE 128. Miss J. D. Had given many symptoms of pelvic disturbance, but no especial organic change to be observed. Had been vomiting more or less for six months, quite continuously for past three months. No line of treatment apparently any good. Finally, at the earnest solicitation of herself and friends it was decided to do a coeliotomy, believing there was some diseased condition of the tubes and ovaries impossible to make out. Operation, February 23, 1894. Uterus not fully developed, yet tubes and ovaries presented a normal, healthy condition. There were some few adhesions giving evidence of past pelvic peritonitis. These adhesions loosened up, tubes straightened, but appendages not removed. The case went on to complete recovery. Stomach behaved very much better after the operation, patient able to retain more nourishment. Morphine given for short time after operation. Slow, but excellent recovery.

CASE 129. Miss A. E. Pelvic peritonitis-dysmenorrhœa. Coeliotomy, February 24, 1894. Removal of uterine appendages. Many firm adhesions. Excellent recovery.

CASE 130. Miss M. D.; family history very good. Never sick, with exception of two attacks of diphtheria, the last occurring in 1889, and dates all trouble from this. Menstruated at 16, never regular, painful. Latter part of 1892 noticed pain in right hypogastric region, associated with enlargement in that locality. Pain increased, but tumor decreased. Coeliotomy, February 27, 1894. Double ovariectomy. Right ovary cystic, removed, cyst wall breaking down and fluid not measured. Left ovary in like condition. No drainage. Recovery uneventful. Discharged thirtieth day.

CASE 131. Mrs. W. J. O. Diagnosis doubtful as to nature of tumor. No children; three miscarriages. Coeliotomy, March 1, 1894. Removal of ovarian cyst, left side. Enlarged ovary on right side with pyosalpinx. Many adhesions. Recovery.

CASE 132. Miss S. N., family history negative. Patient well until six months prior to operation, when languid, not inclined to work, and excitable. Menstruated at fourteen; regular, scanty, and painful. Sharp

pain in lower part of abdomen. Cœliotomy, March 19, 1894. Left ovary cystic, tube much enlarged and corrugated—removed first. Right ovary showed similar condition and removed. Many adhesions. Wound closed without drainage. Recovery uneventful. Discharged nineteenth day.

CASE 133. Mrs. L. D., married, one child. For past two years has suffered greatly from repeated attacks of pelvic peritonitis. An operation was finally advised by her family physician, and in which I fully concurred. Cœliotomy, March 23, 1894. Many adhesions; tubes thickened; excellent specimens pus tubes. Uterine appendages thoroughly removed. One hypodermic morphine given after operation. Patient developed on third day an attack of bronchitis; temperature, 101° ; pulse, 100; respiration, 22; but from this she made a good recovery. Wound did nicely, and she made an excellent recovery.

CASE 134. Miss J. McC., family history good. Menstruated at fourteen; irregular first few years, then regular, but scanty and painful. Patient complained of pains in back in lumbar region; persistent headache, more severe during menstrual periods. Never noticed enlargement of abdomen. Scarlet fever in childhood, followed by inflammatory rheumatism. Diagnosis, pyosalpinx. Cœliotomy, March 30, 1894. Ovaries and tubes low down in pelvis and hard to reach. Diagnosis is confirmed; uterine appendages removed. Iodoform dressing used. Many adhesions. Patient made uneventful recovery. Discharged twenty-fifth day.

CASE 135. Mrs. H. A. L., æt. 43; widow; no children. During married life constantly under treatment for uterine troubles, wearing all manners of pessaries; confined to bed frequently for a year at a time; had severe leucorrhœal trouble, at times dysmenorrhœal trouble. I saw her, five years previous to operation, with family physician; found her suffering severely from retroversion, enlarged tubes, and every evidence of pyosalpinx. Advised an operation, but patient would not consent. During five years following, under variety of treatment, most of the time making use of tampons herself; would recover for a month or so, but most of time confined to bed; great irritation of bladder frequently; constipated; very careless in every respect in care of person; had little love for medical profession, and no kind word for any one. February, 1894, consented to an operation, it requiring nearly a week's work on part of nurse to get surface of patient's body and vagina in any kind of aseptic condition. She was absolutely rebellious to taking of a bath, and proper evacuation of bowels. Made an effort to quarrel with nurse on morning of operation because an additional scrubbing was insisted upon. Cœliotomy in my private sanitarium, March 30, 1894. Diagnosis confirmed. Operation

difficult, though adhesions gave rise to little hæmorrhage. Patient recovered from ether quickly, but rebellious in every respect as to carrying out line of treatment. Insisted upon sitting up in bed; objected to use of bed-pan. Little vomiting; little tenderness over abdomen, but difficult to keep dressings on, she was so restless. Bowels moved second day thoroughly well. At this time noticed abscess developing in left labia; opened and discharged pus very freely. Stitch-hole abscess at lower end of incision. Began to vomit at this time, which continued more or less. She wore out the strength and patience of two nurses, and at last hypodermic injection of morphia was necessary, learning then she had been using it for a long time. Wound, in every respect, aside from stitch-hole abscess, presented a healthy appearance, healing quickly, but patient died, evidently of septic peritonitis, April 5, 1894. No autopsy. I think I voice the sentiment of every operator when expressing the desire to be delivered from such a patient.

CASE 136. Miss J. K. Family history, consumption and diabetes. Menstruated at fourteen; regular, with exception of first few periods, then having seizures resembling epilepsy. Flow normal in amount. Diagnosis, hystero-epilepsy. Cœliotomy, April 16, 1894. Removal of uterine appendages not difficult. Recovery. Discharged twenty-fourth day. Had one convulsion, six months after operation.

CASE 137. Mrs. M. S. Family history, consumption on paternal side; good otherwise. Menstruated at fourteen; regular; dysmenorrhœa. No children; no miscarriages. Typhoid fever in 1886; two years later, pain in ovaries and back. Bloating in extremities and abdomen, disappearing after a time. Fell from hammock at beginning of menstruation, injuring back; later, strained herself leaning over a manger, followed by tumor in abdomen, not perceptible exteriorly, but noticed moving around. Cœliotomy, April 17, 1894. Ovaries found undergoing cystic degeneration; tubes corrugated and distended. Removal of uterine appendages. Many adhesions; good recovery. Bowels moved third day. Discharged May 23, 1894.

CASE 138. Miss L. S. Never strong. Family history, several members died of phthisis. During fall of 1893 patient suffered a prolonged, serious attack of pelvic peritonitis, giving evidence, at times, of trouble with appendix, probably tubercular peritonitis. From this attack she made a fairly good recovery, and improved somewhat during the winter, although at times there presented occasional symptoms of appendicitis. Cœliotomy, April 28, 1894. Ovaries much enlarged, much thickened; pelvic peritonitis; perinæum studded and giving evidence of old tubercular trouble. Appendix had many adhesions, as well as being thickened. This, together with the uterine appendages, was removed. Patient made a good recovery, and discharged May 20, 1894, from private hospital.

CASE 139. Mrs. F.F.; well as a girl. No menstrual trouble. Married at eighteen. Two children. In 1886 began to have pains in back; menstruation irregular since. Diagnosis, cystic ovaries. Coeliotomy, April 30, 1894. Diagnosis confirmed. Removal of appendages; few adhesions; wound closed by silkworm gut sutures. Good recovery; discharged on twenty-second day.

CASE 140. Mrs. E.V. Family history: father died of Bright's disease, mother died of cerebral hæmorrhage, otherwise good. Patient menstruated at seventeen; married at nineteen. First pregnancy normal. At second pregnancy run over with a wagon twice. Three children; two miscarriages; last October 10, 1893, dating illness from this. Severe pain all the time in both sides of the uterus, aggravated during micturition. No movements without the use of cathartics. Never noticed tumor in abdomen. Diagnosis, fibroid uterus; dysmenorrhœa. Coeliotomy, May 12, 1894. Removal of appendages; recovery. Discharged twenty-second day.

CASE 141. Miss E.M.K. Diagnosis is ovarian cyst, confirmed at operation, May 24, 1894. Removal of double ovarian dermoid cysts. Few adhesions. Drainage; recovery; well, June 16, 1894.

CASE 142. Mrs. L.D. Family history, consumption, tumor, and kidney trouble. Patient menstruated at fourteen; regular, painful, and profuse. Two children; no miscarriages. In 1889 was troubled with faintness, pains in abdomen, inguinal region, and back; severe headaches, dizziness, catarrh bladder. Diagnosis, cystic degeneration of both ovaries. Chronic peritonitis. Diagnosis confirmed. Operation May 29, 1894; removal of uterine appendages; no drainage; good recovery. Discharged on twenty-sixth day.

CASE 143. Mrs. A.G.W., married; one child. Five years previous to '88 she had given history of some pelvic lesion, being confined to bed almost continuously. At this time she was much emaciated, waxy, pale-looking. On examination then by Dr. Church, there was found complete retroflexion with pelvic cellulitis, position of uterus and all giving a very distressing condition of constipation and pain in securing a movement of the bowels. She had taken a great quantity of medicine, powerful laxatives having very little effect. There was much distress on pressure over the vertebræ in dorsal and lumbar region, sensitive throughout the whole extent of the spine, with some lateral curvature. In the doctor's attempt to restore the uterus to its normal condition, she suffered a sharp, acute attack of pelvic peritonitis. This was followed by a bloody discharge from the rectum, giving indications of chronic dysentery. Spinal trouble was treated successfully by the application of a plaster of Paris jacket. After the uterus had been restored to its more normal position, the doctor

dilated the cervical canal for relief of the stenosis, which was followed by her only pregnancy. After fully recovering she was attacked with grippe, which was followed by another long siege of dysentery, with evidence of some trouble about the left hip, thought at one time to be a case of hip disease. Finally, all symptoms external to the pelvis improved, and she could walk about quite well, when taken with severe cystitis, which continued in a very tedious manner for some time, accompanied with paroxysms of pain of a most excruciating and lancinating character in right iliac region, resulting in a discharge from the vagina of an exceedingly copious disagreeable-smelling pus. Her general health was now very feeble, complete loss of appetite, free perspiration. At the same time a swelling could be observed in the right lumbar region, also below Poupert's ligament, and at one time there was quite a definite prominence in Scarpa's triangle, making one feel quite positive that it was a case of psoas abscess. All these conditions subsided immediately after free discharge from the plevis. When the case came under my observation in the beginning of the winter of 1894, I felt that it was one of true double pyosalpinx, and advised an operation. This was done on May 30, 1894. Many adhesions present. Diagnosis fully confirmed. Removal of uterine appendages was followed by recovery. Patient doing exceedingly well in every respect. Discharged from private hospital on the twenty-sixth day.

CASE 144. Miss M.C.F., family history fairly good. One case phthisis on mother's side. Noticed enlargement left side of abdomen about nine months previous; all symptoms of unilocular ovarian cyst. Cœliotomy, June 6, 1894. Removal of left ovary and single cyst. Diagnosis confirmed. Simple operation in every respect. Uninterrupted recovery. Patient left private hospital June 20, 1894.

CASE 145. Mrs. A. McN. Probable history of phthisis on father's side. Patient healthy and robust as a girl. Menstruated at fourteen; caught cold, flow ceased, not re-establishing itself for over a year. Regular up to present trouble, which commenced in 1887. Last noticed slight flow in May, 1894. Married twenty-two years. One child stillborn, sixteen years ago. Supposed miscarriage about six years ago, at which time she suffered a great deal of bearing-down sensation and pain in lower portion of abdomen and back. Œdema of ankles at times. Thinks enlargement of abdomen increased slowly. More rapid for three or four months previous to operation, occurring in right side first. Cœliotomy at her own home, June 16, 1894. Multilocular ovarian cyst in right side; short, broad pedicle; hæmorrhage. Recovery. Ligature came away latter part of July. Patient developed symptoms of phlebitis, but in August, 1894, was around the house and doing well.

No.	Name, age, and civil condition.	Physician and residence.	Diagnosis of disease.	Date of operation.	Nature of operation. Removal.	Result.	Remarks.
1	Mrs. C. C. M. 52	Dr. Weidman, Medusa, N.Y.	Multilocular ovarian cyst.	Feb. 20 1888	Multilocular cyst, right ovary. Papillomatous, many adhesions; short, broad pedicle. 20 lbs	D.	Patient died on fourth day from intestinal obstruction. Autopsy: obstruction due to loop small intestine attaching itself to stump pedicle. Uninterrupted recovery.
2	Mrs. S. B. M. 37	Dr. Glidden, Little Falls, N.Y.	Unilocular ovarian cyst.	Feb. 24	Diagnosis confirmed; weight 20 lbs	R.	
3	Mrs. F. C. M. 63	Dr. Houston, Cohoes, N.Y.	Multilocular ovarian cyst; sarcoma of mesentery.	April 9	Multilocular cyst and uterine appendages; drainage.	R.	Patient in good health six months after operation.
4	Miss C. D. S. 24	Dr. Bush, Springfield, N.Y.	Double pyosalpinx, cystic degeneration of ovaries.	May 1	Uterine appendages.	R.	Stitch-hole abscess sixth day; finally good union and excellent recovery.
5	Mrs. L. W. M. 43	Dr. Wright, Canaan, N.Y.	Unilocular ovarian cyst.	May 15	Unilocular cyst, right ovary.	R.	Uninterrupted recovery.
6	Mrs. A. M. M. 46	Dr. Hotaling, W. Township, N.Y.	Unilocular cyst, left side.	May 31	Unilocular cyst, left ovary, also right ovary; many adhesions; weight 32 lbs.	R.	Hypodermic injection morphia every six hours for twenty-four hours, then discontinued.
7	Mrs. A. O'C. M. 46	Dr. Grover, Port Henry, N.Y.	Multilocular ovarian cyst, left side.	May 31	Multilocular cyst, left ovary, also right ovary; many adhesions to intestines and bladder; weight 20 lbs.	R.	Temperature rose on eighth day to 102-104.4° returning to normal on twelfth day after tarry, fetid discharge from vagina; no suppuration.
8	Mrs. P. A. R. M. 55	Dr. Wheeler, Pittsfield, Mass.	Double multilocular ovarian cyst.	July 5	Diagnosis confirmed; some intestinal adhesions giving rise to considerable hemorrhage requiring several ligatures; weight 40 lbs.	R.	Uninterrupted recovery.
9	Miss E. B. S. 26	Dr. Montgomery, Luzerne, N.Y.	Many attacks pelvic peritonitis; salpingitis.	Oct. 1	Uterine appendages; operation difficult.	R.	Good recovery. Two years later patient died from what at time supposed to be sarcoma of cavity of pelvis.
10	Miss M. W. S. 20	Dr. Melick, Fort Edward, N.Y.	Multilocular ovarian cyst, left side.	Oct. 4	Diagnosis confirmed.	D.	Death on fourteenth day from general peritonitis. Autopsy revealed evidence of pelvic hemorrhage, probably caused by ligature becoming loosened in some way.
11	Mrs. C. W. M. 34	Dr. Noble, Cairo, N.Y.	Multilocular ovarian cyst.	Nov. 19	Multilocular cyst, left ovary; right healthy; drainage not removed for 48 hours.	R.	Uninterrupted recovery.
12	Mrs. H. T. S. M. 37	Dr. Johnson, Belknap, N.Y.	Multilocular ovarian cyst.	Dec. 21	Diagnosis confirmed, 12 quarts fluid.	R.	Uninterrupted recovery. Patient in good health June, 1894.
13	Mrs. H. M. R. M. 29	Dr. Reiley, Fair Haven, Vt.	Salpingitis.	Dec. 22	Uterine appendages.	R.	Good recovery. Patient had metrorrhagia for six months after operation; finally, complete recovery
14	Mrs. E. B. M. 39	Dr. Vander Veer, Albany, N.Y.	Pelvic or psosa abscess.	Jan. 4 1839	Pyosalpinx; one ovary and tube; drainage.	R.	Drainage continued for over two weeks,

	Mrs. N. M. M. 26	Dr. Lape, Fair Haven, Vt.	Tubercular peritonitis.	Jan. 5	Right ovary and tube; drain- age.	R.	Mass removed proved on examination to be tuber- cular. Glass drainage gave much discomfort, and moved on fourth day replaced by rubber tube; this re- moved on twelfth day. Death from peritonitis on eleventh day. Possibly obstruction. Uninterrupted recovery. Uninterrupted recovery.
15							
16	Miss I. R. S. 26	Dr. Du Bois, Albany, N.Y.	Salpingitis; pelvic peri- tonitis.	April 5	Uterine appendages.	D.	
17	Mrs. M. E. H. M. 45	Dr. Wheeler, Chatham, N.Y.	Multilocular ovarian cyst.	April 23	Cyst and ovaries.	R.	
18	Mrs. E. C. M. 26	.....	Multilocular cyst, left ovary.	May 21	Diagnosis confirmed; right ovary in state of cystic degen- eration and removed; drain- age.	R.	
19	Mrs. F. W. M. 49	Dr. Van Vranken, W. Troy, N.Y.	Unilocular cyst, left ovary.	June 15	Multilocular cyst, left ovary; drainage.	R.	Good recovery, but patient suffered from hernia six months after operation. Death from shock.
20	Miss B. A. S. 22	Dr. Maxon, N.Y.	Unilocular ovarian cyst.	Aug. 29	Unilocular cyst, left ovary, also right ovary; very adherent.	D.	
21	Mrs. E. B. M. 47	Dr. Fuller, Huntsville, N.Y.	Multilocular cyst, left ovary.	Sep. 23	Cystic uterine appendages; colloid degeneration; drain- age.	R.	Uninterrupted recovery.
22	Mrs. C. L. M. 63	Dr. A. Boyce, E. Schodak, N.Y.	Multilocular ovarian cyst.	Oct. 14	Diagnosis confirmed; many ad- hesions; drainage.	R.	Severe vomiting for forty-eight hours after operation. Drainage quite free. Excellent recovery.
23	Mrs. C. C. M. 59	Dr. Johnson, N.Y.	Unilocular cyst, right ovary.	Oct. 15	Diagnosis confirmed.	R.	Uninterrupted recovery.
24	Mrs. M. B. M. 47	Dr. Layman, Middleburg, N.Y.	Unilocular cyst, left ovary.	Oct. 29	Diagnosis confirmed.	R.	Uninterrupted recovery.
25	Mrs. R. H. M. 36	Dr. Babbitt, Cooperstown, N.Y.	Pelvic peritonitis; sal- pingitis.	Nov. 4	Adhesions loosened, but too severe for removal of appen- dages.	R.	Good recovery. Patient very much improved in health one year after operation.
26	Mrs. R. A. M. 35	Dr. Best, Middleburg, N.Y.	Unilocular cyst, left ovary.	Nov. 11	Unilocular cyst, left ovary, also right ovary.	R.	Uneventful recovery.
27	Mrs. D. S. M. 37	Dr. Allen, Greenbush, N.Y.	Supposed large ovarian cyst.	Nov. 13	Incision; right ovary removed; unilateral peritonitis.	R.	Error in diagnosis. Patient died later on of return of peritoneal dropsy.
28	Mrs. S. N. M. 32	Dr. St. J. Middle, Brunswick, N.Y.	Large unilocular cyst, right ovary.	Dec. 5	Unilocular cyst, right ovary; also left ovary; cyst 22 lbs.	R.	Chill on fourth day controlled by quinine. Uninter- rupted recovery followed.
29	Mrs. H. N. M. 34	Dr. Hall, W. Hartford, N.Y.	Chronic ovaritis; pelvic peritonitis.	Jan. 27 1890	Uterine appendages.	R.	Uneventful recovery.
30	Mrs. A. McK. M. 20	Dr. Turner, Mineville, N.Y.	Chronic ovaritis.	Feb. 23	Uterine appendages; cystic de- generation of ovaries; many adhesions.	R.	Good recovery.
31	Mrs. E. H. M. 55	Dr. Dunlop, Waterford, N.Y.	Multilocular cyst, left ovary.	April 20	Diagnosis confirmed; hard mass on right side not distur- bed.	R.	Good recovery. Hernia observed one year after ope- ration, not troublesome. Hard mass still observed two years and six months after operation, not en- larging. Ligature came away July, 1890.
32	Mrs. J. V. M. 30	Dr. Traver, Troy, N.Y.	Multilocular cyst, left ovary.	April 30	Diagnosis confirmed; drainage removed on seventh day.	R.	Excellent recovery, although long search had to be made for sponge lost in cavity.
33	Miss A. O. S. 30	Dr. Pearson, Schenectady, N.Y.	Chronic ovaritis; dys- menorrhoea.	June 16	Uterine appendages.	R.	Uninterrupted recovery.

No	Name, age, and civil condition.	Physician and residence.	Diagnosis of disease.	Date of operation.	Nature of operation. Removal.	Result.	Remarks.
34	Mrs. E. C. M. 34	Dr. Gray, New York.	Unilocular ovarian cyst.	Sept. 20, 1890	Multilocular cyst, right ovary; parovarian cyst, left side.	R.	Uneventful recovery.
35	Miss L. McC. S. 23	Dr. Young, Greenville, N. Y.	Chronic salpingitis; left ovary cystic; retroversion.	Oct. 7	Right ovary and tube. March, 1889; had been to Seney Hospital, N. Y., and Alexander's operation done by Dr. Pitcher.	R.	Recovery uninterrupted.
36	Miss M. G. S. 18	N. Easton, N. Y.	Multilocular cyst right ovary	Oct. 10	Diagnosis confirmed; left ovary healthy, not removed.	R.	Good recovery. Apposition lower angle, wound not perfect, silk worm gut. Exuberant granulations.
37	Mrs. E. W. M. 24	.....	Chronic salpingitis; pelvic peritonitis.	Oct. 21	Right ovary and tube; left healthy.	R.	
38	Mrs. S. K. M. 33	Dr. Bissell, Troy, N. Y.	Pyosalpinx double.	Oct. 30	Uterine appendages and small fibroid fundus of uterus; drainage.	R.	Free hemorrhage from fundus uterus when fibroid removed, controlled by thermocautery. Ligature came away eight weeks after operation. Recovery uneventful.
39	Mrs. F. M. M. 35	Dr. Matte, N. Adams, Mass.	Ovaritis salpingitis.	Nov. 29	Uterine appendages.	R.	Patient made a slow but good recovery.
40	Mrs. J. E. M. 26	Dr. Kazhan, Schenectady, N. Y.	Ovaritis right side.	Dec. 18	Right ovary size turkey egg, and tube.	R.	Quick recovery. Two years after patient became pregnant, passed through successfully, delivered of living child. Excellent health since.
41	Miss E. K. S. 33	Dr. Vander Veer, Albany, N. Y.	Unilocular ovarian cyst, probably left.	Jan. 3, 1891	Unilocular cyst, left ovary and uterine appendages; drainage.	R.	Tenth day lower end incision opened and from four to five ounces of fetid pus discharged. Irrigation tract of drainage tube. Good recovery.
42	Miss M. G. S. 20	Valley Falls, N. Y.	Tubercular peritonitis; left ovary enlarged.	Jan. 14	Left ovary and tube; drainage.	R.	Good recovery. Patient in excellent health June, 1894.
43	Miss J. S. S. 19	Dr. Vander Veer, Seward, N. Y.	Unilocular cyst left ovary.	Feb. 28	Diagnosis confirmed; right ovary, cyst, and incised.	D.	Immediate hemorrhage due to slipping of ligature, abdomen reopened, pedicle re-ligated. Two pints saline solution poured into peritoneal cavity. Patient did well. Able to do her work for more than a year. Second operation; removal part of new growth. Living June, 1894, with fistulous tract from which protruded sarcomatous mass.
44	Mrs. A. E. M. 20	Albany, N. Y.	Multilocular ovarian tumor	Mar. 3	Mass from left side sarcoma; cysts from right ovary; drainage.	R.	Patient had regular menstrual flow for more than a year, then thoroughly curetted cavity; uterus packed with iodoform gauze, when flow ceased, and she has remained well ever since.
45	Mrs. N. A. M. 30	Dr. Suckles, Philmont, N. Y.	Hæmatosalpinx.	Mar. 18	Uterine appendages; right side extra-uterine pregnancy.	R.	Ligature came away nearly six months after operation; sinus readily healed. In good health August, 1894.
46	Mrs. M. S. M. 44	Dr. Rushton, Amsterdam, N. Y.	Multilocular ovarian cyst.	April 23	Multilocular cyst, left ovary; right ovary undisturbed.	R.	Good recovery.
47	Mrs. E. C. M. 33	Dr. Babcock, Albany, N. Y.	Chronic ovaritis.	May 4	Uterine appendages; extensive adhesions; drainage.	R.	Hernia one year after operation

43	Mrs. A. McC. M. 32	Dr. Webster, Schuylerville, N. Y.	Chronic ovaritis and pyosalpinx; specific.	May 22	Uterine appendages.	R.	Good recovery from operation, but complained for over two years of old feeling; weakness about pelvis and pain in back.
49	Mrs. E. C. M. 33	Dr. Neher, Nassau, N. Y.	Chronic ovaritis and pyosalpinx.	May 27	Uterine appendages; drainage.	R.	Good recovery. Patient had undergone opera- tion for lacerated cervix three months previously. Excellent health, August, 1894. Excellent recovery.
50	Mrs. E. B. M. 28	Dr. McHarg, Albany, N. Y.	Multilocular ovarian cyst.	May 30	Multilocular cyst and both ovaries; drainage.	R.	Good recovery, somewhat slow. In excellent health, August, 1894.
51	Miss L. M. S. 26	Dr. Church, Oneonta, N. Y.	Cystic degeneration ovaries and salpingitis.	July 13	Uterine appendages.	R.	Excellent recovery and in good health, June, 1894.
52	Mrs. A. E. E. M. 42	Dr. Bigelow, Albany, N. Y.	Multilocular ovarian cyst; peritonitis.	Sept. 1	Multilocular cyst, left ovary and right ovary, cyst suppurating; drainage.	R.	Good recovery. Patient in good health a year afterward.
53	Mrs. M. M. M. 32	Dr. Felter, Troy, N. Y.	Unilocular cyst, left ovary.	Oct. 1	Left ovary, also hydrosalpinx, right side.	R.	Excellent recovery, and in good health two years after operation.
54	Mrs. V. S. M. 53	Dr. Nichols, Worcester, N. Y.	Ovarian cyst, right side.	Oct. 6	Unilocular cyst, right ovary; six quarts fluid.	R.	Excellent recovery.
55	Mrs. A. R. M. 55	Dr. Mambert, Roundout, N. Y.	Multilocular ovarian cyst.	Oct. 6	Suppurating cyst and both ovaries; drainage.	R.	One year after operation developed second abscess, producing septicæmia, from which she died.
56	Mrs. N. P. M. 31	Dr. Lamont, Catskill, N. Y.	Supposed suppurating ovary, right side.	Oct. 8	Incision; great adhesions of intestines; large abscess; drainage.	R.	Good recovery. In excellent health two years after operation.
57	Mrs. E. J. L. M. 30	Dr. Magee, Lansingburg, N. Y.	Unilocular ovarian cyst with peritonitis.	Oct. 15	Cyst and both ovaries.	R.	Very good recovery, but died one year after from cancer in stomach, vomiting almost continually for three months previous to death.
58	Miss I. R. S. 19	Dr. Salmon, Lansingburg, N. Y.	Chronic ovaritis; dys- menorrhœa.	Oct. 19	Uterine appendages; atrophy of both ovaries.	R.	Second operation (see Case 35). Patient in excellent health, August, 1894. Excellent recovery.
59	Miss L. McC. S. 24	E. Glenville, N. Y.	Cyst of left ovary.	Nov. 9	Cyst left ovary like small orange.	R.	Excellent recovery.
60	Miss K. E. M. S. 23	Dr. Bigelow, Albany, N. Y.	Unilocular ovarian cyst.	Nov. 24	Unilocular cyst, left ovary; right ovary cystic and removed.	R.	Excellent recovery.
61	Mrs. M. J. V. M. 40	Dr. Gray, Cambridge, N. Y.	Unilocular ovarian cyst.	Dec. 7	Unilocular cyst, left ovary.	R.	Excellent recovery.
62	Mrs. L. McK. M.	Dr. Vander Veer, Albany, N. Y.	Cystic degeneration ovaries; pelvic peri- tonitis; salpingitis.	Dec. 7	Uterine appendages.	R.	Excellent recovery.
63	Mrs. M. B. M. M. 13	Dr. Pond, Proctor, Vt.	Pelvic peritonitis; hydrosalpinx.	Dec. 14	Uterine appendages; many ad- hesions; atrophy both ovaries; drainage.	R.	Excellent recovery. Patient relieved promptly from all sufferings. November and December, 1893, quite a flow each month. Excellent health since; last seen, May, 1894. Excellent recovery.
64	Mrs. F. E. D. M. 27	Dr. Sheffield, Massonville, N. Y.	Pyosalpinx.	Jan. 1892	Uterine appendages; tubes large and filled with pus; drainage.	R.	Good recovery.
65	Mrs. D. B. M. 30	Dr. Edwards, Gloversville, N. Y.	Unilocular ovarian cyst, possibly tubercular peritonitis.	Jan. 26	Right tube and ovary; tubercular peritonitis; drainage.	R.	

No.	Name, age, and civil condition.	Physician and residence.	Diagnosis of disease.	Date of operation.	Nature of operation Removal.	Re-sult.	Remarks.
66	Mrs. M. K. M. 47.	Dr. Simons, Conajoharie, N. Y.	Unilocular ovarian cyst.	Feb. 2 1892	Unilocular cyst, left ovary; also right ovary; dermoid; drainage.	D.	Broad pedicle. Immediate hemorrhage from retraction vessels before abdominal incision closed. Vessels tied separately. At end 48 hours, from condition, pulse, symptoms—possible internal hemorrhage. Wound reopened; only 1 ounce of blood in pelvic cavity; drainage. Death sixth day from exhaustion. Good recovery. In excellent health May, 1894.
67	Mrs. I. H. M. 57	Dr. Infield, Sandy Hill, N. Y.	Multilocular ovarian cyst.	Feb. 12	Cyst, right ovary; slight adhesions.	R.	Menstruated nearly every month since operation. Better for some time of epileptic seizures, but September, 1894, quite as bad as ever.
68	Mrs. M. A. D. M. 25	Dr. Smith, Johnstown, N. Y.	Salpingitis; hysterio-epilepsy.	March 5	Uterine appendages.	R.	Patient in excellent health May, 1894.
69	Mrs. F. S. M. 35	Dr. Gray, Greenwich, N. Y.	Tubercular peritonitis.	March 9	Uterine appendages; drainage.	R.	Patient died three months after operation; from all symptoms general tuberculosis.
70	Miss B. C. S. 16	Dr. Holdridge, Niskayuna, N. Y.	Tubercular peritonitis.	April 8	Uterine appendages; drainage.	R.	Patient in excellent health May, 1894.
71	Mrs. A. B. M. 32	Dr. Millbank, Greenbush, N. Y.	Tubercular peritonitis.	May 2	Incision, cocaine; ovaries studied with tubercles, also peritoneum; drainage.	R.	Patient in excellent health May, 1894.
72	Mrs. A. H. M. 28	Dr. Nichols, Sand Lake, N. Y.	Ovarian cyst, peritonitis.	May 26	Cyst, right ovary; numerous adhesions; ligated; drainage.	R.	Good recovery. Patient in good health one year after operation.
73	Mrs. L. G. M. 42	Dr. Papen, Albany, N. Y.	Multilocular ovarian cyst.	May 29	Cyst of right ovary and tube; many adhesions; hydrosalpinx; left tube and ovary removed; drainage second day.	D.	Suffered from diabetes for two years. At time of operation passed urine containing nine grains sugar to the ounce. Died comatose third day.
74	Mrs. I. L. M. 35	Dr. Haynes, Cohoes, N. Y.	Unilocular ovarian cyst.	June 15	Cyst, left side; right ovary healthy; two gals. fluid; drainage.	R.	Excellent recovery and in good health June, 1894.
75	Mrs. M. D. M. 48	Dr. Hannan.	Ovarian cyst.	Aug. 30	Diagnosis confirmed.	R.	Uninterrupted recovery.
76	Mrs. L. C. B. M. 71	Dr. Wilson, Schodack, N. Y.	Multilocular ovarian cyst.	Sept. 30	Cyst, right ovary; left ovary not disturbed; some adhesions; 8 qts. fluid; drainage.	R.	Good recovery. Patient alive June, 1894.
77	Mrs. H. G. W. 40	Dr. Geel, Berlin, N. Y.	Double pyosalpinx, specific.	Oct. 10	Uterine appendages; very tedious operation; many adhesions; drainage.	D.	Death on sixth day from exhaustion.
78	Mrs. M. A. A. M. 27	Dr. Knapp, Forest City, Pa.	Double pyosalpinx and tubercular peritonitis.	Oct. 14	Uterine appendages; drainage.	R.	Good recovery. Patient writes, May, 1893, seldom had such good health as then enjoying.
79	Miss A. A. S. 30	Dr. Kellog, Plattsburg, N. Y.	Double pyosalpinx, chronic ovaries.	Oct. 30	Diagnosis confirmed; uterine appendages.	R.	Good recovery. Much improved in health December, 1893.
80	Mrs. E. W. S. 24	Dr. Scully, Rome, N. Y.	Multilocular ovarian cyst, peritonitis.	Nov. 1	Cyst, right ovary; some adhesions.	D.	Death on fifth day, due to intestinal obstruction.

81	Miss E. W. S. 16	Dr. Taylor, Bainbridge, N.Y.	Multilocular ovarian cyst.	Nov. 3	Diagnosis confirmed.	R.	Recovery on about sixteenth day.
82	Miss C. L. L. S. 40	Drs. Kniskern and Stover, Amsterdam, N.Y.	Double pyosalpinx.	Nov. 29	Diagnosis confirmed; uterine appendages.	R.	Excellent recovery.
83	Mrs. K. O.	Dr. Johnson.	Unilocular ovarian cyst.	Dec. 1	Diagnosis confirmed.	R.	Good recovery.
84	Mrs. E. G.	Dr. Carty, N. Granville, N.Y.	Ovarian cyst and pyo- salpinx.	Jan. 16, 1893	Cyst and uterine appendages.	R.	Excellent recovery.
85	Miss F. W.	Dr. Lough, Edmeston, N.Y.	Unilocular cyst right ovary.	Jan. 18	Diagnosis confirmed; left ovary healthy; not disturbed.	R.	Excellent recovery. In good health, September, 1894.
86	Mrs. M. B.	Dr. Papen, Albany, N.Y.	Multilocular ovarian cyst and suspected pregnancy.	Jan. 18	Multilocular cyst, right ovary; pregnancy 4 months; 27 pints fluid.	D.	Patient's history very interesting. Tapped twice. Aborted forty-eight hours after operation. Death from exhaustion on fifth day.
87	Mrs. F. K.	Dr. Phillips, Gloversville, N.Y.	Cyst, left ovary.	Jan. 23	Unilocular cyst each ovary; 9 pints fluid.	R.	Excellent recovery. Good health June, 1894.
88	Mrs. A. W. K. M. 57	Dr. Gorham, Albany, N.Y.	Multilocular ovarian cyst; recent peritonitis.	Feb. 2	Cyst, right ovary; left ovary and tube normal; slight adhe- sions; 25 pints fluid; drainage.	R.	Excellent recovery. In good health September, 1894. Looks ten years younger than before operation.
89	Mrs. D. S. M. 34	Dr. Brownell, Oneonta, N.Y.	Double pyosalpinx; prob- ably specific; several attacks pelvic periton.	Feb. 11	Uterine appendages very serious adhesions.	D.	Operation long and tedious. Death from exhaustion on third day.
90	Mrs. E. D. M. 23	Dr. Brownell, Oneonta, N.Y.	Double pyosalpinx.	Feb. 13	Uterine appendages.	R.	Good recovery, though at times suffered from pelvic pain, and had some flow for few months following operation.
91	Mrs. A. W. M. 24	Dr. Hall, Adamsville, N.Y.	Left ovary diseased; dysmenorrhea, etc.	Feb. 16	Uterine appendages; left ovary prolapsed and developing cyst; right cirrhotic stenosis of tube.	R.	Good recovery. In excellent health, June, 1894.
92	Mrs. K. W. M. 25	Dr. Magee, Lansingburg, N.Y.	Pelvic peritonitis; pyo- salpinx double.	Mar. 18	Uterine appendages; cystic de- generation of ovaries; firm adhesions.	R.	Not a rapid recovery, but ultimately improved and presents the best appearance of health, June, 1894.
93	Mrs. S. M. 27	Drs. Lincoln and Hodgman, Wilton, N.Y.	Pyosalpinx puerperal.	April 19	Right ovary.	D.	Operation following confinement twelve days pre- viously. Septic condition; uterus curetted twice; chills, etc., not controlled. Death fourth day.
94	Miss J. K. S. 15	Dr. Ross, Whiting, Vt.	Tubercular peritonitis.	May 2	Incision; drainage.	R.	Excellent recovery.
95	Mrs. F. D.	Dr. Johnson, Ashtand, N.Y.	Ovarian cyst.	May 4	Unilocular cyst, left ovary.	R.	Uninterrupted recovery.
96	Mrs. E. P.	Dr. Fritts, Hudson, N.Y.	Cyst right ovary.	May 16	Unilocular cyst, right ovary.	R.	Quick recovery. Second operation; Dr. T. G. Thomas removed cyst, left ovary, 1879.
97	Mrs. I. P.	Dr. Rider, Buskirk's Bridge, N.Y.	Multilocular ovarian cyst; peritonitis; pos- sible suppuration and pregnancy.	July 24	Multilocular cyst, right ovary; slight adhesions scant; three months pregnant.	R.	Good recovery followed by normal confinement at full time. In excellent health June, 1894.
98	Mrs. M. F. M. 32	Drs. Archambeault and Morrow, Coboes, N.Y.	Tubercular peritonitis.	Sept. 7	Diagnosis confirmed; drainage.	R.	Good recovery. In excellent health six months later.

No.	Name, age, and civil condition.	Physician and residence.	Diagnosis of disease.	Date of operation.	Nature of operation. Removal.	Result.	Remarks.
99	Miss M. S. S. 38	.....	Multilocular cyst, right ovary.	Sept. 8 1893	Diag. confirmed; pyosalpinx; left tube removed with ovary.	R.	Excellent recovery.
100	Mrs. E. G. D. M. 27	Dr. Pond, Rutland, Vt.	Extra-uterine pregnancy, right side.	Sept. 17	Extra-uterine pregnancy, right side, with tube and ovary; pyosalpinx, left ovary and tube removed; drainage.	R.	Rapid recovery.
101	Mrs. E. W. M. 29	Dr. Stover, Albany, N.Y.	Double pyosalpinx, probably specific.	Sept. 21	Uterine appendages.	R.	Good recovery. Patient doing well June, 1893
102	Mrs. J. C. D. M. 28	Dr. Keegan and Henney, N.Y.	Extra-uterine pregnancy.	Sept. 21	Four months' fetus and placenta; many clots right side.	D.	Death from shock in twelve hours.
103	Miss G. T. S. 18	Dr. Smith, Poughkeepsie, Vt.	Tubercular peritonitis.	Sept. 22	Uterine appendages; ovaries and tubes studded with tubercular masses; tubes thickened; drainage.	R.	Excellent recovery.
104	Mrs. M. V. W. 52	Dr. Easton Van, Hornersville, N.Y.	Multilocular cyst, right ovary.	Sept. 23	Diagnosis confirmed; some adhesions; left ovary healthy; not removed; 7 quarts fluid.	R.	Splendid recovery.
105	Mrs. E. E. M. 54	Dr. Ullman, Albany, N.Y.	Multilocular cyst, right ovary; peritonitis.	Sept. 25	Diagnosis confirmed; firm adhesions one spot; left ovary normal, not disturbed; 10 quarts fluid.	R.	Excellent recovery. In good health August, 1894.
106	Mrs. I. A. M. 27	Dr. Riley, Adams, N.Y.	Multilocular ovarian cyst.	Sept. 28	Multilocular cyst, left ovary, also right ovary and tube; 14 quarts fluid.	R.	Rapid and excellent recovery.
107	Miss E. S. 20	Dr. Gray, Greenwich, N.Y.	Ovarian abscess; pyosalpinx double.	Oct. 4	Uterine appendages.	R.	Good recovery; fairly encouraging result. Private hospital.
108	Mrs. M. S. M. 27	Dr. Kniiskern, Amsterdam, N.Y.	Double pyosalpinx.	Oct. 7	Uterine appendages; tubes very much thickened and filled with pus; drainage.	R.	Good recovery. Patient obliged to go to work at once, September, 1894, presented with threatened hernia.
109	Miss M. R. S. 60	Dr. Bigelow, Albany, N.Y.	Multilocular cyst, right ovary.	Oct. 12	Diagnosis confirmed; no adhesions; left ovary senile, not disturbed.	R.	Excellent recovery.
110	Mrs. J. M. M. 40	Dr. Mead, Jerusalem, N.Y.	Double pyosalpinx; abscess.	Oct. 12	Uterine appendages.	R.	Slow but gradual recovery. Patient very neurotic.
111	Mrs. L. de L. M. 45	Dr. Willard, Watertown, N.Y.	Diseased left ovary; very painful; double pyosalpinx.	Oct. 15	Diagnosis confirmed; uterine appendages.	R.	Recovery retarded. September, 1894, relieved of all pelvic pain, but still confined to bed more or less.
112	Mrs. H. M. M. 36	Dr. Rossman, Ancram, N.Y.	Double ovarian cyst and uterine fibroid.	Oct. 21	Diagnosis confirmed; supravaginal hysterectomy; ligatures; drainage.	R.	Excellent recovery.

113	Mrs. J. S. M. 37. Miss M. N. S. 31	..... Dr. Vander Veer, Troy, N.Y.	Cyst, left ovary. Multilocular ovarian cyst.	Oct. 21	Large cyst, right ovary, also left ovary for cystic degeneration. Double multilocular ovarian cyst; uterine fibroid supra- vaginal hysterectomy; Tait clamp; 5 quarts fluid.	R.	Good recovery.
114				Oct. 30	Multilocular cyst, left ovary; right ovary cirrhotic and re- moved with tube.	R.	Good recovery.
115	Mrs N.C.P. M. 23	Dr. Wheeler, Chatham, N.Y.	Probably sarcoma, left broad ligament.	Nov. 2	Diagnosis confirmed; uterine appendages.	R.	Good recovery. In good health June, 1894.
116	Mrs.S.H. M. 20	Dr. Niver, Hillsdale, N.Y.	Double pyosalpinx.	Nov. 2		D.	Patient did nicely; wound healed; began to sit up on twenty-first day; twenty second day symptoms of obstruction presented. Unable to relieve, and died on twenty-seventh day.
117	Mrs. R. C. M. 46	Dr. H. H. Smith, Hudson, N.Y.	Tubercular peritonitis.	Nov. 2	Incision, drainage; diagnosis confirmed, 12 quarts liquid.	R.	Excellent recovery.
118	Mrs. E. McC. M. 34	Dr. Reynolds, Saratoga, N.Y.	Pelvic peritonitis; dys- menorrhea.	Nov. 16	Uterine appendages; firm ad- hesions.	R.	Good recovery.
119	Miss K. S. 30	Dr. Chambers, Kingston, N.Y.	Old general and pelvic peritonitis; dysmenor- rheal hysterectomy-epilepsy.	Nov. 29	Right ovary and tube like in- testine; many and very firm adhesions; left ovary and tube could not be found.	R.	Patient very much better until May, 1894, when severe convulsive seizures, flowing coming on two months in succession at this time.
120	Mrs. H. W. M. 28	Dr. Knapp, Forest City, Pa.	Pelvic peritonitis	Nov. 30	Uterine appendages; cystic de- generation of ovaries; firm adhesions.	R.	Good recovery. In excellent health eight months later.
121	Miss E. L. H. S. 32	Dr. Vander Veer, Troy, N.Y.	Unilocular ovarian cyst.	Dec. 7	Multilocular cyst, left ovary; right ovary for atrophy; 10 quarts fluid; cyst 15 ounces.	R.	Excellent recovery.
122	Miss S. S. 28	Dr. Cook, Albany, N.Y.	Double pyosalpinx; Uterine fibroid.	Dec. 7	Diagnosis confirmed; uterine appendages.	R.	Excellent recovery. Patient in good health June, 1894.
123	Mrs. E. M. C. M. 27	Dr. Ross, Poultney, Vt.	Pelvic peritonitis; double pyosalpinx.	Dec. 15	Uterine appendages; very firm adhesions.	D.	Death from shock.
124	Mrs. M. S. M. 71	Dr. Van Slyke, Coxsackie, N.Y.	Multilocular ovarian cyst.	Dec. 18	Multilocular cyst, right ovary; 16 quarts fluid, cyst 3 lbs.	D.	Patient recently suffered from grippe. Death from pulmonary infarction.
125	Mrs P. S. M. 27	Dr. Crosbie, E. Nassau, N.Y.	Unilocular ovarian cyst.	Dec. 21	Unilocular cyst, right ovary; also left ovary cystic enlarge- ment.	R.	Good recovery.
126	Miss H. V. S. 19	Dr. Papen, Oneonta, N.Y.	Multilocular ovarian cyst; acute peritonitis.	Jan. 2 1894	Cystic papillomatous mult. cyst, left ovary; right ovary cystic; firm adhesions; drain- age; removed second day, 11 quarts fluid.	R.	Patient made good recovery. Returned in August with marked growth left side pelvis, probably nature of true sarcoma. No further operation done.
127	Mrs. E. F. S. M. 42	Dr. Sabin, W. Troy, N.Y.	Pelvic peritonitis; double pyosalpinx.	Feb. 22	Uterine appendages; many and firm adhesions; drainage.	R.	Good recovery.
128	Miss J. D. S. 26	Dr. Johnston, Amsterdam, N.Y.	Supposed disease of ova- ries, causing sympa- thetic vomiting.	Feb. 23	Section ovaries and tubes, healthy; not removed; some adhesions loosened and tubes straightened.	R.	Slow but excellent recovery.

No.	Name, age, and civil condition.	Physician and residence.	Diagnosis of disease.	Date of operation.	Nature of operation. Removal.	Re-sult.	Remarks.
129	Miss A. E. S. 26	Dr. Millington, Albany, N.Y.	Pelvic peritonitis; dysmenorrhea.	Feb. 24 1894	Uterine appendages; many adhesions.	R.	Excellent recovery.
130	Miss M. D. S. 22	Drs. Stover and Kniskern, Amsterdam, N.Y.	Pelvic peritonitis and enlarged ovaries.	Feb. 27	Uterine appendages; cystic enlargement both ovaries.	R.	Good recovery.
131	Mrs. W. J. O. M. 23	Drs. Babcock and Somory, Springfield, N.Y.	Diagnosis doubtful as to nature of cyst.	Mar. 1	Multilocular cyst, left ovary; right ovary enlarged with pyosalpinx; many adhesions.	R.	Good recovery. Patient on returning home had much pain, relapsing into former morphine habit.
132	Miss S. N. S. 29	Dr. McCulloch, Gloversville, N.Y.	Pelvic peritonitis; chronic disease left ovary; severe dysmenorrhea.	Mar. 19	Uterine appendages; many adhesions.	R.	Excellent recovery.
133	Mrs. L. D. M. 29	Dr. Johnston, Amsterdam, N.Y.	Double pyosalpinx.	Mar. 23	Uterine appendages.	R.	Excellent recovery.
134	Miss J. McC. S. 34	Dr. Mosler, N.Y.	Double pyosalpinx.	Mar. 30	Uterine appendages; many adhesions.	R.	Excellent recovery.
135	Mrs. H. A. L. W. 43	Dr. Nichols, Sand Lake, N.Y.	Pelvic peritonitis; retroversion; diseased ovaries.	Mar. 30	Uterine appendages; many very firm adhesions.	D.	Death from peritonitis. Patient very stubborn and hard to manage.
136	Miss J. K. S. 34	Dr. Lee, Canaan, N.Y.	Hystero-epilepsy; chronic ovaritis.	April 16	Uterine appendages; not difficult.	R.	Speedy recovery. At end of third month no return of epileptic seizures.
137	Miss S. S. 34	Dr. Shaw, Housatonic, N.Y.	Double pyosalpinx; enlarged ovaries.	April 17	Uterine appendages; many adhesions; 7 quart fluid.	R.	Excellent recovery.
138	Miss L. S. S. 31	Dr. Garney, Kinderhook, N.Y.	Double pyosalpinx; enlarged ovaries; possibly tubercular.	April 28	Uterine appendages and appendix; few adhesions.	R.	Excellent recovery.
139	Mrs. F. F. M. 26	Dr. Melick, Saudo Hill, N.Y.	Double pyosalpinx; pelvic peritonitis.	April 30	Uterine appendages; few adhesions.	R.	Good result. Patient improved very markedly three months after operation.
140	Mrs. E. V. M. 20	Dr. Starks, Chatham, N.Y.	Small interstitial fibroid uterus; dysmenorrhea.	May 12	Uterine appendages.	R.	Good recovery. No return of flow. August 24, 1894, patient improved very decidedly.
141	Miss E. M. K. S. 34	Dr. Seymour, Troy, N.Y.	Ovarian cyst.	May 24	Double ovarian dermoid cysts; few adhesions.	R.	Splendid recovery.
142	Mrs. I. D. M. 30	Dr. Faust, Schenectady, N.Y.	Double pyosalpinx; chronic peritonitis.	May 29	Uterine appendages.	R.	Excellent recovery.
143	Mrs. A. G. W. M. 29	Drs. Reed and Church, Oneonta, N.Y.	Double pyosalpinx.	May 30	Uterine appendages.	R.	Good recovery. Patient doing finely when leaving private hospital.
144	Miss M. C. F. S. 27	Dr. Henan, Albany, N.Y.	Unilocular ovarian cyst.	June 6	Unilocular cyst, left ovary.	R.	Excellent result. Patient had improved in health September 10, 1894, looking very much better.
145	Mrs. A. McN. M. 40	Dr. Bissell, Troy, N.Y.	Unilocular ovarian cyst.	June 16	Unilocular cyst, left ovary; short, broad pedicle; hemorrhage.	R.	First ligature slipped, requiring three additional ones. Pedicle then brought up and attached to lower end incision. Second week portion sloughed, pedicle came away. Some phlebitis of left leg; otherwise excellent recovery.

In presenting somewhat brief, yet quite as full, histories of these cases as space would permit, and, perhaps, taking much more time to read them than many will care to do, it will be observed that occasionally one is omitted, and this is in consequence of notes having been mislaid, or the history not being sufficiently completed in my record book. It will be observed, however, that in the table a sufficient history is given to enable one to classify the cases without difficulty.

I am not unmindful that it would have been much more comforting to myself to have commenced this paper by reporting to you first my successful cases—cases that have brought to me much encouragement in my work, meeting patients in improved health, and receiving letters filled with gratitude and acknowledgment of recovery.

Regarding the preparation of patients, it seems to me quite difficult to establish a fixed line of action. I believe that, so far as possible, it is wise to carry out the preparations at home, before the patient enters upon hospital life. It is true there are some cases very calm and not affected by the thought of entering the hospital, and yet there are many who are made somewhat nervous by being kept under observation too long away from home. I would like to emphasize somewhat the importance of regulating the bowels, and proper attention to such diet as does not constipate previous to the time of operation. I also wish to say that I place much stress upon the importance of a careful examination of the urine.

Now that we understand so well the evil effects of the *bacillus coli communis*, we should see that the intestinal tract is put in a good, sanitary condition. The previous habit of the patient as to the use of morphine or opium should be carefully observed, and is not a contraindication to operation, but the same will necessarily be needed after, and without fear in giving as full doses as may be required to control pain.

As to the preparation of the room, I have long since done away with the use of the carbolic spray, having had a tiresome experience in that direction, and rely upon thorough cleanliness, washing all wood work, walls and floors, with the bichloride solution.

A large proportion of these cases reported were operated upon in the amphitheatre of the Albany Hospital, and some in the presence of 150 or more students. As to the length of the incision I can only say that my experience endorses all that Dr. Joseph Price has said in his admirable paper upon this subject. I have endeavored to make it as short as possible with safety.

As to the use of the drainage tube, usually glass, it may be said that I have used it with greater freedom than most of the operators at the present time. I must be excused somewhat by reason of the anxiety I have experienced in immediate hæmorrhage, in the two cases reported,

and, therefore, have felt that the tube, wherever there was any possible fear of this occurring, or where the oozing was likely to be greater than the peritoneum could care for, was the safest procedure. I have employed it in thirty-nine cases, exclusive of the cases of tubercular peritonitis proper, and have not hesitated to leave it in as long as the gauze tent introduced through the calibre of the tube gave no disagreeable staining, removing it sometimes within six hours after the operation, and sometimes leaving it in from eight to ten days. Where left in this length of time, I have followed it with the rubber tube. I have invariably made use of the rubber dam, and then employed the gauze packing instead of the syringe for removal of the accumulating fluid, and have found this procedure quite as comfortable to the patient, and to myself it has seemed better than the employment of the syringe. I may be mistaken, but I believe that this table of cases exhibits quite as many and as severe adhesions as present in the average run of *cœliotomies*. Of the whole number, twelve cases gave a record of previous tapplings, and only two or three had escaped adhesive inflammations.

Regarding the closure of the wound in the use of silk, however well prepared, I have had occasionally a stitch-hole abscess. For the past four years I have used silkworm-gut exclusively, and have very seldom met with this condition, as the table will show. I desire to emphasize here that I know of no kind of operative surgery that requires such careful apposition of wound surfaces, bringing like tissue in connection with like, as in the abdominal incision. I have not made use of the different rows of sutures, still I am not unmindful of the valuable arguments presented in favor of this procedure.

As to the time of removing the stitches, it is well if the superficial ones are removed at the end of the second day, or during the first dressing of the wound, and then the deep ones I believe it is wise to leave until about the eighth or tenth day. They do no harm, and certainly help to keep the abdominal incision in more perfect apposition.

In conditions of continued oozing from adhesions, and where the abdominal walls have been greatly stretched by the size of the tumor, I must say that I have seen, in two of my cases, a most happy result from folding the abdominal wall over on itself, having previously put in through-and-through sutures of silkworm-gut, taking them out at the end of forty-eight hours.

As to hernias resulting, as far as I have been able to learn, I know of but three cases, and in one instance this was plainly due to the carelessness of the patient in attempting too much heavylifting within so short a time after the operation.

As to the dressing of the wound, I have uniformly employed the powdered iodoform, one part to three of starch, then the iodoform gauze, with the Gamgee pads and flannel bandage, doing the first dressing at the end of forty-eight hours, removing what is usually but soiled iodoform gauze, reapplying the second dressing and letting it remain until the wound is healed, except in cases where the drainage tube may have produced some soiling.

Out of this number of cases I can report only one where the Fallopian tubes were freed from adhesions, straightened—not removing the ovaries—and a good result followed.

It will be observed that my mortality list contains three cases in which a fatal intestinal obstruction was due to a coil of intestine becoming fastened to the stump of the pedicle. For the past two years, in such cases, where the stump seemed to flatten out over the ligature, I have brought the peritoneal surfaces together with one, two, or three interrupted sutures of very fine silk, and comfort myself with the belief that it has, perhaps, had some effect in obviating this unfortunate post-operative complication.

The annoying cases I have found, and somewhat disastrous, are those brought to me by the family physician desiring an immediate operation that day or the next morning, in order that he might return home, but anxious to see the operation. These cases are fortunately growing less and less, as the members of the profession realize more and more the importance of preparatory treatment, and of the operator seeing the case long enough in advance to feel sure of his diagnosis and operative procedure. I wish to make an observation, and that is in reference to the serious cases that are likely to come from one particular practitioner, one who procrastinates and keeps the patient, either by medication or tapping, under his treatment as long as possible, and then suggests operative interference when all the chances are against the surgeon. My mortality list contains three of these cases from one practitioner. I do not wish to criticize, but would enter a plea that wherever an abdominal tumor presents, in the practice of any physician, it becomes almost his duty to call in the aid of a surgical assistant, that the line of treatment may be agreed upon as early as possible. In the study of these cases I have been impressed in two or three by the very marked history given by the patient of the tumor having appeared on one side, and yet when the operation was reached the pedicle and attachment were found on the other side.

As to the pulse and temperature, I am satisfied that the former is of far more importance than the taking of the latter. The heart's action plainly tells of serious trouble going on in the way of intestinal obstruction, or of either form of peritonitis. There are many conditions really

non-essential as to the recovery of our patient that will cause an increase in temperature apparently alarming. Any nerve strain, a visit from a friend, the discharge of blood that occurs from the vagina after an operation, and which appears in quite a number of cases, will sometimes prostrate the patient mentally, in itself producing an increase of temperature, but is of no serious import as regards recovery.

In getting the histories of patients I have been much impressed with the number of cases having a family history of phthisis, or malignancy. Thirty-nine cases of this table gave a distinct history of phthisis, fifteen of cancer in some form, while fifty-seven gave a history of marked irregularity of menstruation, with dysmenorrhœa, many of them from the beginning of the menstrual act.

Making a closer analysis of the table there were thirty-nine cases of ovarian cyst, multilocular, with five deaths; twenty-five cases of ovarian cyst, unilocular, with two deaths; three cases of double ovarian cyst, multilocular, with one death; two cases of multilocular cyst complicated with pregnancy, with one death; two cases of double multilocular ovarian cyst, complicated with fibroid tumors; there were twenty-seven cases of double pyosalpinx, unilateral, with one death; tubercular peritonitis, six cases; tubercular peritonitis, with removal of one or both ovaries, five cases; chronic ovaritis, six cases; extra-uterine pregnancy, three cases, with one death; exploratory incision-relieving adhesions and straightening tube, one case; one case double pyosalpinx and removal of appendix; removal of uterine appendages for uterine fibroid, one case, making a total percentage of mortality in 145 cases of 11 per cent. In making a closer analysis we find that there were three deaths from peritonitis, two deaths from hæmorrhage, three deaths from shock, three deaths from intestinal obstruction, one death from diabetes, three deaths from exhaustion, one death from puerperal septicæmia, and one death from pulmonary infarction.

Among the cases of recovery there are a few thoroughly instructive. Cases 35 and 59 constitute the same patient. The others are Cases 38, 41, 44, 49, 58, 63, 96, 107, 112, 114, and 140.

A word as to the time of patient's returning home after an operation. I do not believe that it is always the greatest wisdom to hurry a patient home with encouragement to go on with her household and other duties, and particularly is this true in cases of removal of uterine appendages, for pyosalpinx, and such like conditions. They must be made to understand that all their unpleasant symptoms will not disappear at once. It takes months for them to recover, and they are sometimes greatly disappointed in their hopes not being promptly realized.

I have but one case to report of keen anxiety in the loss of a foreign substance in the peritoneal cavity, and that is Case 32, Mrs. J.V., where a small sponge became entangled in mesentery of the small intestine, and gave great trouble in the search for it. I am now exceedingly careful about having any very small sponges handed me.

I regret that more careful attention was not paid to the weight of tumors in the table, but part of this work was confided too much to advanced students and house surgeons, and not done thoroughly well.

Three cases give an interesting history of ligatures escaping through the sinus left by the drainage tube, the ligature in one case being of coarser silk than ought to have been used. No ill-effect followed, the sinus being closed as soon as the ligature was recovered. Possibly in one patient, Case 31, Mrs. E.H., it may have assisted in causing the hernia.

As to the after-treatment, I am most rigid in not allowing the patient the use of the hypodermic injection of morphia any more than is absolutely necessary, but prefer to give it where there is restlessness due to a weak heart's action, and where the pain is so great as to be intolerable.

For treatment of persistent vomiting I have seen excellent results from the combined administration of cocaine, calomel, and oxalate of cerium, and then I can only endorse the use of calomel and salines for moving the bowels. A movement should be secured, if necessary, by the aid of injections, as early as the second and third day, not later than the fourth day, after the operation. As to diet, my patients have been greatly benefited by the carrying out of the hot-water treatment, and the use of matzoon, particularly if the stomach is at all nauseated; also, for relief of thirst, rectal injections of hot water, slightly saline.

A RAPID METHOD OF STAINING FRESH TISSUES BY THE AID OF FORMALIN.*

BY THOMAS S. CULLEN, M.D.,

Assistant Resident Gynæcologist, Johns Hopkins Hospital,
BALTIMORE, MD.

FORMALIN, formaldehyde, and formal are looked upon as synonymous terms. Formalin was first used by Blum, of Frankfurt, aM., in 1893, as a preservative for gold fish, frogs, mice, etc. The animals were not only well preserved, but the colors were retained. Since then Hermann, Hoyer, and others have employed it for histological purposes. The tissues hardened in this fluid are little, if at all, contracted. Accordingly the cells are in no way distorted, but stand out with great distinctness.

While working with formalin specimens, it occurred to me that it might be of use in the preparation of frozen sections. The outcome was that we were able to make permanent specimens from the frozen sections in fifteen minutes, and that these specimens were fully as good as those hardened in alcohol for several weeks and then imbedded in celloidin. Frozen sections, after being treated with formalin, are rapidly passed through 50 per cent. and absolute alcohol; they may then be stained in the same manner as any other hardened section would be. If, for example, we use hæmatoxylin, the process is as follows:

(a) Make frozen sections of the fresh tissue, freezing either with carbonic acid (as used by Professors Welch and Flexner) or with ether.

(b) Place in 5 per cent. aqueous solution of formalin for five minutes.

(c) Fifty per cent. alcohol two minutes.

(d) Absolute alcohol one minute.

(e) Pass through water.

(f) Stain in hæmatoxylin two minutes.

(g) Decolorize in acid alcohol.

(h) Wash in water.

(i) Counterstain in eosin twenty seconds.

(j) Pass through 95 per cent. alcohol, absolute alcohol, and then clear up in creosote or oil of cloves. Mount in Canada balsam.

*Being a Preliminary Note.

We found that the blood was not preserved by this process ; Dr. Welch accordingly suggested that pieces of the tissue be first hardened and then cut on the freezing microtome. I tried this method and found that the blood was preserved. It, however, stained very poorly. This latter method may be called Method No. II., and is as follows :

(a) A piece of the flesh tissue, say, 1x5x2 c.m., is placed in 10 per cent. aqueous solution of formalin for two hours.

(b) It is then frozen and sections cut.

(c) The sections are placed in 50 per cent. alcohol for three minutes.

(d) In absolute alcohol one minute.

(e) Passed through water.

(f) Stained in hæmatoxylin two minutes.

(g) Decolorized in acid alcohol (1.5 per cent.).

(h) Counterstained in eosin, twenty seconds.

(i) Passed through 95 per cent. alcohol and absolute alcohol ; cleared either in creosote or oil of cloves, and mounted in Canada balsam.

From Method I. it will be seen that, given a piece of tumor from the operating room, one is able to render as accurate a diagnosis at the expiration of fifteen minutes as he would be able to do after examining a specimen which had been hardened for two or three weeks either in alcohol or Müller's fluid. Method II. is of especial value in the examination of uterine scrapings. At the operation the pieces of mucosa are to be put in a small bottle containing a 10 per cent. aqueous solution of formalin. The pathologist will probably receive them in a couple of hours, and can immediately freeze, cut, stain, and examine them.

When examining epithelioma some of the cell nests may drop out, as they have nothing to hold them in place, as is the case when celloidin is used. We have, however, hardened and stained epithelioma of the cervix uteri by this method without the slightest difficulty.

MEDICAL EVIDENCE IN THE HYAMS TRIAL.

DR. EDMUNDE. KING : Have practised since 1886. Have known the prisoners, and have been and am now their medical adviser. Saw Harry Hyams on the 16th of January, when Wells was killed, at my office, and again at Colborne street.

Why did he come to your office ?

To get me to go to Colborne street, where, he said, an accident had occurred. He told me that a young man had happened with an accident, and for God's sake to hurry up, as he thought that he had been killed. I hurried down. He preceded me. Dallas and Harry Hyams were in the building when I arrived. I asked where the accident was. Harry said down in the basement. Dallas, Harry, and I went downstairs. We went down the steps at the northeast corner of the building. On the west side was the hoist, and the body lay on the ground twelve or eighteen inches from the hoist. The body lay east and west, with the feet more to the south. The head was about eighteen inches from the weight slide. The body was lying with the face up. The legs were straight, the arms at the side, slightly bent, the hands touching the clothes. The head was lying partly to one side, the right cheek uppermost. It was twisted to the left, but the left cheek did not touch the floor.

Was there anything on the eyes ? No spectacles ?

No.

Was there anything on the hands ?

I think not.

In what condition was the head ?

Badly crushed.

Describe the injuries.

There was a clearly defined line in a slanting direction from behind the ear on the right side above the ear and across the forehead. The skull was crushed into the form of a cone or wedge, about the thickness of and shape of my two hands placed together. The line was like a mark made by the edge of the weight.

Was there a break in the skin over the eye ?

Yes, over the right eye, and the eyelids protruded, as if they had been pushed out by the great force inside the skull. I did not see the eyeballs, because the eyes were swollen and closed.

What account of the accident was given to you by either of the prisoners?

I asked how it happened, and they said that the weight had fallen on him. I was led to believe that they had taken the weight off. I understood them to say, "We took the weight off."

Tell us what they told you about the accident.

They explained to me that the hoist was out of order, and that the weight had fallen down and struck Wells on the head. They said the hoist had been frequently out of order.

Did you see anything wrong with any of the Hyams?

Harry's fingers were abraded. I thought nothing about this.

Well, did you do anything with the body?

No. The man was dead, and I telephoned to Coroner Aikins.

How did they tell you it occurred?

They said the weight had caught in the box. They said that it had caught before.

Where was the weight?

West of the head, about six inches away from the head, about ten inches from the weight slide, nearer Colborne street. I think it was standing on its end.

Cross-examined by Mr. Johnston, Dr. King said his office was on the ground floor, and well lit by two large windows, sufficiently to allow of his noticing anything remarkable about any one entering. He noticed that Harry's hands were bleeding, but did not remember observing blood-stains on his clothes. He hurried to the scene of the accident, Harry having preceded him. Dallas expressed his satisfaction at his arrival.

From conversation with the prisoners, he understood that the accident had happened as previously stated. He was quite clear that the body was not in the same position as when first struck. There was a considerable spatter of blood on and about twelve inches above the buffer. Witness then described the appearance of the skull of deceased. The wound over the eye was from the inside outwardly. It had no appearance of being inflicted by a chisel or hammer. The edge of the wound was not clean cut. The body was still warm when he arrived, shortly after nine o'clock, and death must have taken place very shortly before his arrival, not more than fifteen or twenty minutes. The lifting of the weight, in his opinion, would cause just such wounds as appeared on Harry's fingers. The appearance of the cage gave him the impression that it had come down rather violently. There was no evidence

of a struggle in the clothes of prisoners or deceased, or in the surroundings, nor was there any evidence of an external wound, excepting those caused by the weight. He saw no scratch or blood upon Dallas when they went upstairs after viewing the body. The office was light enough for him to have noticed a scratch on Dallas' face. In the opinion of the witness, a man, to have sustained such wounds as the deceased, could not have been standing up or lying down. He thought that the probability was that he was looking up the shaft at the time the weight fell. He certainly would not be surprised to find that the trousers of any one lifting the weight from the head of deceased, ten minutes after the accident, would be spattered with blood.

Mr. Osler was proceeding to re-examine the witness relative to his evidence in the police court, when Mr. Lount objected. The judge ruled that Mr. Osler could proceed. The first point was as to whether deceased had gloves on when the body was seen by the doctor. In the police court witness said he did not think gloves were on the hands. He still thought so. He would not be positive. The wrist was bare, for witness took hold of it to feel for the pulse.

Mr. Osler desired to ask questions about the position deceased might have been in when the weight fell, when Mr. Lount objected. Again the court ruled in favor of Mr. Osler, who then proceeded to closely question the witness as to the opinions he had formed relative to the accident. Dr. King said he was still of the opinion that the death was caused by the weight falling on the head of the deceased.

Mr. Osler then went to the door of the judge's room, and, with his hand, outlined the comparative position of the elevator, and weight, shaft, and where deceased might have stood. The witness accepted the shaft outline, but not the suggested position deceased might have been standing in when the weight fell.

Mr. Osler : Come down here, then, doctor, and show the jury.

Dr. King stepped down and showed that, in his opinion, young Wells was standing at the door of the elevator shaft, right below the weight, with his head thrown back, and looking obliquely up in such a way that the weight, in descending, struck him on the right temple, forward towards the eye.

DR. JOHN CAVEN.

Dr. Caven, Professor of Pathology in Toronto University, was the first of the medical experts called. He was instructed on Feb. 13 to examine a body, said to be that of the late William C. Wells. Coroner Johnson was associated with witness in making the post-mortem examination. Dr. Spencer and Dr. Teskey were also present. Crown Attorney Curry and Mr. W. G. Murdoch were also in the morgue when the post-mortem was

made. The body was in an advanced state of decomposition. The only broken bones were in the head. The head fell off the body. He then removed the skin and flesh from the head, and produced the base of the skull, the teeth, the cheek bones, and several loose pieces of bone. Witness fitted the skull together as well as the broken bones would admit.

Dr. Caven proceeded to give a description of the injuries to the head of deceased, as shown from the post-mortem examination. The parts of the skull were on the desk in front of witness. He divided the injuries into two sections, the first dealing with the upper half of the skull, and the second part with the injuries to the lower half. Death was due to the injuries to the head.

Mr. Osler : What instrument would produce the results we see, and what force would it be necessary to apply ?

Witness : To produce the injuries in the back of the skull the head must have been resting on something solid, and the force applied to the right side. To produce the injuries to the base, force must have been applied to force the base of the skull into the vertebræ. Force must have been applied from the side and from the front. That means two separate forces.

Mr. Osler : Then how do you say the frontal injuries were caused ?

Witness : I think such injuries were caused by force applied from the front, although the injuries are consistent with an additional force from the side.

Mr. Osler : How do you think the injuries were inflicted ?

Witness : The blow or force on the right side must have been distributed broadly over the side of the face, that is, with an instrument covering the surface of the side of the head.

Mr. Johnston conducted the cross-examination. He began by a series of questions intended to show that Dr. Caven had not been a practising physician for any length of time. The witness, however, showed that he had several years' actual practice, that he had been on the hospital staff, and had for years devoted his labors to the study of disease, examination of broken bones, and to all of the necessary medical examination of the various parts of the human body. The next series of questions were directed to show that serious differences of opinion existed among the Crown medical witnesses as to whether one or more blows were necessary to cause the injuries. The witness, however, contended that no actual difference arose between the experts. The only question discussed was the probable result of a certain kind of blow.

Then Mr. Johnston took up the theories as to the force which caused the injuries, and he read the evidence given by witness in the police court. Mr. Johnston endeavored to make it appear that the evidence

before the police magistrate differed from that given yesterday. A long duel ensued between counsel and witness, the former strongly arguing in favor of his contention to the effect that a grave difference existed between the two statements, whilst the witness argued with equal force that the two statements were perfectly consistent.

Mr. Johnston : Now, then, after all this discussion, do you say such a weight as that standing there (pointing to the fatal weight) would not cause all the injuries?

Witness : I think, if the head was resting on a solid substance, all the injuries might have been done by the weight, but it is not probable.

Mr. Johnston then asked the witness whether it was not possible that the weight tipping over might have caused all the injuries.

Witness : I would not like to say what is possible.

Mr. Johnston : Well, is it not likely to have caused these injuries?

Witness : No. Taking into account all the injuries, they could not have been caused by one blow.

DR. A. J. JOHNSON.

Coroner Johnson was the next witness called by the Crown. He was of opinion that the frontal injuries were caused by a blow struck on the right side of the face, the blow having an upward tendency. Another blow must have been struck with great force on the right side of the head whilst the head was lying with the left side on the ground, or on some hard substance. He was of opinion that probably a third blow was struck, but of that he was not quite sure.

In answer to Mr. Johnston, witness said he had not been to Washington, D.C., to examine the skulls in the School of Anatomy there. He visited Washington for private reasons. He did look at a number of the skulls there. The government did not pay his expenses. He had not been retained in a dozen cases for the Crown within the past two years. He had been called in one case last year, and in two cases this. The Crown did not always call him after learning his opinion on cases of suspicious death. There was a case this year in which the government did not call him after he had inquired into the case. He did not always consult with the Crown as to the opinions he formed. The Crown did not know all the evidence he was going to give to-day. The medical experts for the Crown did not have several conferences relative to the force which caused the injuries. Two meetings only had been held. No differences of opinion existed as to the main point of the number of blows necessary to have inflicted the injuries shown by an examination of the skull. He had heard Dr. Caven's evidence, and agreed with it in the main. Dr. Caven's theory of how the injuries might have been caused

was a feasible one. He thought Mr. Johnston had misunderstood Dr. Caven's reference to one blow having done all the injuries. What Dr. Caven said, according to Dr. Johnson's understanding of it, was that the injuries, other than that to the malar, or cheek bone, and frontal bones generally, might have been caused by one blow.

To Mr. Osler, witness said if the weight fell on the head after the malar or cheek-bone injuries had been inflicted, then the weight might inflict the other injuries. This answer was conclusive as to the opinion of the witness that two forces or blows had been used to cause all the injuries.

DR. JAMES H. RICHARDSON.

Dr. Richardson has been in practice since 1847, and is professor of anatomy. He could not think that one blow did the injuries. Taking into account Undertaker Humphrey's statement to the effect that the left eye bulged out and that the right eye was driven in out of sight, the witness was positive two blows were struck. The injuries to the skull as revealed at the post-mortem examination could not, under any conceivable circumstance, be caused by one blow. Proceeding, Dr. Richardson gave a brief and clear account of the injuries as shown on the skull.

His evidence caused the defence to hold a hurried consultation with Dr. Cameron and some of the other medical men, after which Mr. Johnston said he did not desire to cross-examine the witness.

DR. F. LE M. GRASETT.

Dr. Grasett said he had examined the skull, and he thought there was no question that a strong lateral force had been applied to the right side of the head with some firm rest beneath the head. Also, taking into consideration the evidence of the undertaker, that of Dr. Caven in the post-mortem report, and the evidence of the skull itself, he thought there was no question but that a blow had been given from the front. He thought that the instrument producing the lateral force was a broad, heavy one.

Mr Johnston said that in the interests of the defence they did not deem it necessary to cross-examine Dr. Grasett.

Mr. Osler: I notify my learned friends that if any theory should be set up by the defence I claim the right to recall my medical witnesses.

Mr. Lount: We do not admit the claim.

DR. L. MACFARLANE.

Dr. McFarlane said he had examined the skull, and had come to the conclusion that the fractures in the dome and at the base had been caused by a diffusive force applied to the right side of the head while the left was resting on a solid base. That would account for all the fractures except probably that on the forehead. That he should suppose due to a blow from the right and front going backwards, slightly upwards and inwards.

DR. L. M. SWEETNAM.

Dr. Leslie M. Sweetnam testified that he had examined the skull, and, taking into consideration the evidence of the undertaker and Dr. Caven, he was of opinion that two lines of force had been applied, one on the right side and one on the front. The blow on the right side had been applied while the head was on some hard substance. He had heard Dr. Caven's evidence and agreed with it.

DR. B. E. M'KENZIE.

Dr. B. E. McKenzie gave evidence identical with that given by Dr. John Caven, and, in examination by Mr. Johnston, described the same methods and offered the same reasons for arriving at his conclusions that Dr. Caven had. In reply to Mr. Osler, he said that there was evidence of force applied in more than one direction. The general direction of most of the fractures would indicate a force from the right side, which was opposed from the left side by resistance. He based his conclusions that there were two lines of force on the evidence given by Dr. Caven, and obtained by the post-mortem examination, regarding the bony parts of the face, and the fact that the superior maxilla had been driven backward; also on the testimony of Undertaker Humphrey as to the condition of the face, and, lastly, from that of Dr. King, that he could not see the eye, together with the facts which were borne out by the condition of the skull, namely, the fracture of the internal angular process of the right side, which bore evidence of the application of force other than that on the right side.

Mr. Johnston sought but failed to get Dr. McKenzie to admit that he coincided with Dr. McFarlane's statement that if the skull were crushed across the front part of the head he would not be surprised to find the skull in its present condition; that was, that the fracture on the forehead might have been thus produced. Mr. Johnston, in order to explain how the inner angular processes might have been fractured without the nasal bones having been broken, tried to make the witness admit that thinner bones lying between the point of application of force and thicker bones might escape fracture while the thicker ones were broken, owing to the fact that the thinner bones were better transmitters of vibrations than thick ones. Dr. McFarlane gave admission to the theory regarding thinner bones being better transmitters, but said that in the present case the distance from the point of application of the force was so great that the vibrations would be very much extended.

DR. J. M. COTTON.

Dr. J. M. Cotton testified that, in his opinion, a lateral force and one from the front had been given to produce the condition of the skull. To the lateral blow, too, resistance had been offered from the left side.

DR. A. PRIMROSE.

Dr. Alex. Primrose, Assistant Professor of Anatomy in the University of Toronto, had examined the skull, and had gone over each line of fracture, and described it minutely in a report he had made. There were evidences of a lateral force applied to the right side of the head, and of resistance offered on the left side. The fracture of the internal angular process, he said, might, in his opinion, be made by a great, crushing blow delivered laterally, but the evidence given by Undertaker Humphrey, Dr. King, and Dr. Caven pointed to a blow delivered in front.

To Mr. Johnston, Dr. Primrose said he did not agree with Dr. King in saying that the wound, as Dr. King had described it, indicated that it was the result of the crushing together of the frontal portion of the head, and not of a blow from the outside. He thought that it indicated a wound delivered from the outside.

Mr. Johnston : Suppose the surface struck was extensive enough to cover the parietal bone and the cheek bone, and that the force applied was very crushing, might it not produce all the fractures in the skull ?

Dr. Primrose : Yes, it might.

THE DEFENCE.

Mr. Johnston expressed surprise that the Crown had not called Coroner Aikins.

Mr. Osler said the coroner had been consulted by the defence about giving expert evidence, and that made it impossible for the Crown to call him.

DR. W. H. B. AIKINS.

Coroner Aikins was then called by the defence. He said to Mr. Johnston that he asked the Deputy Attorney-General if he (the witness) should give expert evidence for the defence. The Deputy Attorney-General thought witness should not give expert evidence. As a result of this conversation, the witness was not going to give expert testimony. He remembered the morning of January 16th, 1893. He got on that day, about ten o'clock in the morning, a telephone message from Dr. E. E. King, to the effect that an accident had occurred in the warehouse at 28 Colborne street. He took the necessary papers for an inquest, and proceeded with all possible haste to the scene of the accident. He saw the body in the basement. It lay with the head about a foot or eighteen inches away from the shaft. The body was stretched from north to south. He saw one of the prisoners, but did not know which. He did not notice any injury to the hand of the prisoner he saw. There were two pools of blood, and the appearance of the blood led the witness to suppose that the body had been dragged back from the elevator. In a figurative sense, the head felt like a bag of bones. He telephoned Dr. King and told him,

that he could not take the necessary oath of a coroner to the effect that an inquest was necessary. As a result no inquest was held. He did not know the prisoners, and was in the premises about half an hour. He believed the weight was lying on the floor on its narrow side when he saw it, and not leaning against the weight shaft casing, as several of the previous witnesses had said it was.

He did not see glasses on the face, and was sure there were none. He did not observe gloves on the hands. The sides of the head were pressed together as if by a terrific blow.

Witness was cross-examined by Mr. Osler. Did not know of a motive for this crime, or of the large amount of insurance.

Mr. Osler : You formed your opinions as to the cause of death by what you were told by the prisoners ?

Witness : And by all the surrounding circumstances as I saw them.

Mr. Osler : You have been in consultation with the defence, have you not ? Did you not see a man from New York in Mr. Horn's office ?

Witness : Yes, I was asked to give expert evidence for the defence, but after my consultation with the Deputy Attorney-General I decided not to do so.

Mr. Osler : You have been consulted by medical men on this case, and consulting with them ?

Witness : Only in a general way.

Mr. Osler : You wanted to hold an inquest on the body two years after the death, did you not ? Now, was that because of any new light on the subject ?

Witness : I heard of the exhumation, and the law allows the Crown Attorney to order an inquest, so I saw Mr. Dewart on the matter.

DR. LUKE TESKEY.

The first witness was Dr. Teskey, Professor of Anatomy in Trinity Medical College, and one of the staff of the Toronto General Hospital. He said he had been in practice since 1877. He saw the body of Wells in the city morgue, and was present at the post-mortem examination made by Drs. Caven and Johnson. When the post-mortem took place the bones of the skull were loose, and had to be picked out of the soft matter of the head. Looking at the face, there appeared to be marks of severe injuries to the skull, and the nose was turned slightly to the left side. He had seen the weight now in court in the police court, and he was of opinion that the injuries to the skull might have been caused by the weight striking the face of deceased in a certain manner. Referring to the evidence of the Crown witnesses, Dr. Teskey said the injuries to the skull might have been caused by one or other of two blows. The malar or cheek bone being one of the strongest in the skull, the bones inside of it are frequently

fractured, whilst the malar or cheek bone itself may not be fractured at all.

Mr. Johnston : Now, it is said the cellar, where the accident occurred, is from seven to eight feet in height. Young Wells was about five feet six inches. He was looking up when the weight struck him. It is said he stood in the door of the weight shaft looking up to see what obstructed the operating of the elevator. Whilst he was in that position, the defence say, the weight struck him, falling from a height of from one to one and a half feet from the head of deceased. It struck him, knocked him down, resting on his head, and causing those injuries which proved fatal. Of course no one saw the accident. Now, what do you say to this explanation of the cause of death ?

Dr. Teskey : I think that would exactly account for the great injuries to the skull. The weight falling in such a manner as described would account for the great shattering, such as I find here, pointing to the skull of deceased.

In answer to further questions, witness took up a complete skull, and proceeded to describe in technical terms the injuries the first contact of the weight with the face might cause, and illustrated how the weight would strike the head the second time, using a book to represent the weight. The injuries this second blow would cause were also described.

Mr. Johnston at this point stood in front of the dock where the prisoners sat, and, taking hold of the rail, showed witness the position in which the defence say young Wells was standing at the time of the accident. According to Mr. Johnston's theory, the weight caught on an obstruction as it reached the first floor. Young Wells looked up the shaft to see what caused the obstruction, and was standing in that position, with the right side of his face upwards, when the weight descended.

Witness thought the theory of the defence a reasonable one. He believed all the injuries were caused in the manner described by Mr. Johnston.

The cross-examination by Mr. Osler was conducted with a view to show the impossibility of the death having been caused in the manner stated by the defence. Witness said it was impossible to locate the first blow or its results. In his opinion, the bulk of the injuries were caused by the second blow.

Mr. Osler : So you have the man knocked down by one blow, and injured by the second blow. Now, might the blow have been struck with an axe or a sandbag ?

Witness : Not with an axe, but it might with a sandbag.

Mr. Osler : You are positive it could not be with an axe ?

Witness : Well, it might ; but I do not think so. An axe would leave a mark.

Mr. Osler : So we have a man knocked down by one blow, probably rendered insensible, and then struck by some other blow and killed ?

Witness : Yes.

Mr. Osler produced a plan of the basement, showing that the height of the cellar was 9 feet $7\frac{1}{4}$ inches. He turned to witness, and said : Now, with the momentum a fall of more than four feet would give such a weight, which would you expect to reach the ground first, the body or the weight ?

Witness : There is no evidence that the weight came down direct.

Mr. Osler : Oh, then the weight hung in the air to allow the body to fall first ?

Witness : Well, if you mean to the floor, the weight would reach the floor first.

Mr. Osler : So, then, the body ought to have fallen on the weight, and not the weight on the body ?

The witness then proceeded to show the relative distance of the head of deceased from the weight when the weight toppled over on the skull ; to do this he placed a skull on the floor and showed how the weight might have struck the head as the deceased lay stunned on the floor. It was not possible to tell how the legs and arms of deceased might be.

To Mr. Lount, witness said the arms and legs of deceased would be probably stretched out, owing to the muscular action which follows certain injuries to the brain. If deceased had been struck by an axe, witness would expect to see some external marks on the face. In this case, there were none compatible with a blow from an axe or a hammer.

DR. I. H. CAMERON.

Dr. I. H. Cameron said the skull of deceased had been terribly injured. He did not differ in his opinion on any material point from the evidence given by Drs. Johnson and Caven. If the weight struck the face in the angle the defence say the deceased's head was in at the time of the accident, it would stun the man, probably crack the skull, and throw the body to the ground. If the weight then fell on the head, and the head rested on a solid substance, all the injuries shown on the skull could have been produced. The injuries showed no sign that deceased had been struck by a small hammer. The flat of an axe might break the cheek bone, but it would leave a mark somewhere. He could conceive the weight striking the head and forcing the body to the ground before it, and thus leaving the weight on the top of the head. The law governing the falling of weights through the air would, if no other obstacle intervened, indicate that the weight would reach the ground first. An obstruction to one of the falling bodies, the weight for instance, if only of

a momentary nature, might allow the body to reach the floor the same time as the weight. If the first blow stunned deceased, he would practically fall where he stood, and the muscular action in death would account for the legs being stretched out. An instrument with a flat surface about six inches by three inches might, if used with sufficient force, cause the injuries to the malar bone.

Mr. Johnston : If the weight, carrying the head with it, struck the buffer, what do you say about the injuries ?

Witness : That is the most reasonable thing I have heard.

In answer to further questions, the witness said there were no indications of a blow from a hammer. Such a blow would drive in a piece of the skull. If no obstruction took place to delay the descent, the weight would reach the ground before the body, but something might interfere with the general law on such subjects. If struck and stunned, as suggested by Mr. Johnston, the body of Wells would fall in a heap, the legs stretching out owing to the muscular action caused by injury to the brain.

To Mr. Osler, witness said that a flat-surfaced instrument six inches by a little less than three inches would cause the malar bone injuries. The injuries to the skull would be caused if done when the head of the deceased lay on the floor, the left side being on a hard surface. The blow in the air would not cause all the injuries.

DR. BERTRAM SPENCER.

Dr. Bertram Spencer agreed generally with the evidence given by Drs. Teskey and Cameron. It took exactly two hours to pick out all the bones of the skull from the putrid mass. He was of opinion that the theory of the defence, to the effect that deceased was first struck by the weight and stunned, and that the weight then fell on deceased's head, crushing it into the mass it was found to be in, was the most reasonable explanation of the cause of death. He thought if the weight struck the deceased in the way described deceased would fall as if shot through the heart. It was reasonable to suppose that the muscular action in death would tend to stiffen and straighten the limbs.

To Mr. Osler, the witness said the head must have been resting on a solid substance when the force was applied. In his opinion, there was no positive evidence of two blows. In fact, there was no evidence of a second blow.

DR. LYND.

Coroner Lynd was called on and corroborated the evidence given by the preceding medical witnesses. If the weight in descending caught for a moment even on an obstruction, the body might reach the ground first. If the second blow was as severe as described, it would so crush the skull that it would not be possible to distinguish the injuries caused by the first blow from those caused by the second.

DR. A. B. ATHERTON.

Dr. A. B. Atherton was of opinion that the injuries had been caused by a blow delivered with great force on the right side of the head, whilst the left side lay on some hard substance. A broad-surfaced instrument, such as the end of the weight in court, might possibly strike the side of the head, and glance off, leaving scarcely any mark.

In cross-examination, the witness said there was no evidence of two blows having been struck.

DR. F. W. STRANGE.

Dr. F. W. Strange agreed with the previous witnesses as to the cause of the injuries shown to have been inflicted on the skull of deceased.

Mr. Johnston, standing in front of the prisoners' dock, and placing himself in the position Wells is supposed to have been in when the weight first struck him, asked the doctor if the result would be as the defence suggested.

Witness : That would be a reasonable result.

Mr. Johnston : If there were two blows, one of them delivered with the force evidently used in one instance, could the injuries by each separate blow be easily distinguished ?

Witness : No. They would run into each other.

DR. N. A. POWELL.

Dr. N. A. Powell, Coroner, was of opinion that if the deceased stood as Mr. Johnston suggested, and the weight fell from a height of one or two feet the man struck would be knocked down, away a little from the weight and rendered insensible. The delivery of a crushing blow on the right side of the head would cause all the injuries visible. It would be impossible to distinguish the injuries received from the first blow from those given by the blow delivered whilst the head lay on the floor.

DESCRIPTION OF THE FRACTURES IN THE WELLS SKULL.

The following minute description of the skull shows how completely it was crushed. This work was done by Prof. A. Primrose, associate Professor of Anatomy in the Medical Faculty of the University of Toronto. The cuts are from photographs, which will aid the reader in following the description :

A sagittal fracture beginning at a point $2\frac{3}{4}$ inches in front of the highest part of the occipital bone in the middle line. The fracture extends forwards, consisting at first of a separation of the parietal bones (in front of the above point) at the sagittal suture, thence from the bregma it extends forwards, with a slight inclination to the left, to a point one inch above the root of nose. At this point the fracture changes its direction, passing towards the middle line again, and terminating just at the foot of the nose. The whole

THE WELLS SKULL.



VAULT, FROM THE FRONT.

length of the fracture is eight inches. This sagittal fracture throughout extends through the entire thickness of both the bones, both inner and outer tables, and anteriorly opens up the frontal sinus, fracturing the anterior and posterior walls of the sinus. The line of fracture through the inner wall of the sinus is slightly to the right of the fracture in the outer wall.

From the parietal eminence of the right side four fractures radiate as follows :

The first radiating fracture :

Passing upwards with a slight deviation backwards for three inches, and terminating in the sagittal suture at the posterior extremity of the sagittal fracture.

(a) A fracture which is almost a direct continuation of this one begins half an inch in front of the termination of the above fracture and proceeds through the left parietal bone from the sagittal fracture in a direction downwards, with a slight deviation backwards, to terminate at a point three-quarters of an inch below and one inch behind the parietal eminence.

This fracture is joined by the fracture which I am about to describe as the second radiating from the above point (that is, from the parietal eminence of the right side), and these two fractures uniting here are continued on as a single fracture.

(b) This single fracture we shall call (b), passing four inches downwards and forwards through the parietal bone and the squamous part of the left temporal, to terminate in a fracture which has entirely separated the left petrous part of the temporal bone from the skull. The fracture actually terminates by splitting the roof of the bony external auditory meatus, and then passes into the petrous part of the temporal bone in the manner indicated.

(c) From a point $1\frac{1}{2}$ inches from the termination of (b) in the external auditory meatus a fracture extends forwards, with a slight curve upwards, through the squamous part of the temporal bone and the great wing of the sphenoid, and terminates at the external angular process of the frontal bone on the left side.

(d) From the left external angular process of the frontal the fracture (c) is joined by a fracture which passes upwards and backwards, to terminate at a point directly below the parietal eminence of the left side.

The second radiating fracture :

A second fracture radiating from the parietal eminence of the right side passes first a direct course to the lambda, four inches ; then, changing its direction, passes forwards and somewhat upwards, to terminate at the point described above, where (a) terminates three-quarters of an inch below and one inch behind the left parietal eminence.

(e) A fracture closely related to the first and second radiating fractures may be described here. It begins at a point in the first radiating fracture, three-quarters of an inch from the vertex, and passes backwards and slightly outwards to the lambdoid suture ; it crosses the lambdoid suture and changes its direction, passing downwards and inwards through the occipital bone, and terminates in a fracture in the base one-quarter of an inch behind the right occipital condyle. This fracture is almost in the sagittal direction, but is to the right of the middle line.

(*f*) At the point where (*e*) joins the lambdoid suture a fracture extends to the right through the lambdoid suture itself until the mastoid portion of the right temporal bone is reached. It then extends through the tip of the mastoid process, and terminates in the jugular foramen.

The third radiating fracture :

From the right parietal eminence this fracture passes downwards, with a slight curve backwards, to a point $1\frac{3}{4}$ inches directly above the tip of the mastoid process. At this point it joins at right angles a fracture passing horizontally which we shall describe as (*g*).

(*g*) Begins at a point where the fracture (*f*) joins the lambdoid suture and extends upwards and forwards for three-quarters of an inch ; it then changes its direction and passes forwards, parallel with and one-half inch above the zygoma, and terminates in a fracture which separates the bones at the squamous suture.

The fourth radiating fracture :

This fracture radiates from the right parietal eminence ; it passes horizontally forwards, with a slight inclination downwards, to a point $2\frac{1}{2}$ inches directly above the root of the zygoma. Here it changes its direction, and passes downwards and forwards to the pterion. From this point it continues along the squamous suture, and meets (*g*) at the point where (*g*) terminates. It then continues on, passing downwards and backwards through the temporo-sphenoidal suture, which it separates completely to a point one-half inch above the zygoma.

(*h*) At a point in the fourth radiating fracture, $1\frac{1}{2}$ inches behind the right external angular process of the frontal bone and $1\frac{1}{2}$ inches above the zygoma, a fracture starts and runs horizontally forwards and slightly upwards, through the anterior inferior angle of the right parietal bone and the frontal bone, crossing at right angles the sagittal fracture at a point two and one-quarter inches above the root of the nose, passing through the left side of the frontal bone, and terminates in the coronal suture, two and one-half inches from the external angular process of the left frontal bone.

(*i*) The posterior and upper part of the great wing of the sphenoid of the right side, representing a piece of bone one inch in vertical diameter and one-quarter inch wide, is broken out, the posterior separation being through the fracture described as (*h*). Immediately above this a small triangular piece of bone (one-half inch from base to apex, and three-eighths of an inch wide at the base) is cracked, but not completely separated.

The fractures at the base :

(*j*) At the left external angular process of the frontal bone, at a point where fractures (*c*) and (*d*) meet, a fracture is continued backwards (by separation of the suture between the orbital surface of the great wing of the sphenoid and the orbital plate of the frontal in the roof of the orbit). This fracture is continued on through the base of the skull, through the spheno-maxillary fissure, and then, passing backwards, the great wing of the sphenoid is broken away from the body of the sphenoid immediately external to the roots of the pterygoid processes. The fracture extends through the foramen ovale and the foramen spinosum to the spine of the sphenoid ; it is there joined by the extremity of the fracture which is described as (*b*), which extends through the external auditory meatus and the glenoid fossa to the spine of the sphenoid as indicated. The

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RIGHT SIDE.

fracture is thus through the roof (posteriorly) of the external auditory meatus and its anterior wall and fractures the glenoid fossa along the line of the glasserian fissure. These fractures through the external auditory meatus pass inwards and terminate in the fracture which separates entirely the petrous portion of the left temporal bone.

NOTE.—The fractures described as (*δ*), (*ε*), and (*γ*) cause a separation of a piece of bone composed of portion of the squamous part of the temporal bone carrying the zygoma (which was merely separated at the suture between it and the malar), the great wing of the sphenoid, the articular portion of the glenoid fossa, and the roof and part of the anterior wall of the external auditory meatus. This piece of bone was thus entirely separated from its connections.

(*δ*) In connection with the above piece of bone carrying the articular fossa for the lower jaw, note that the lower jaw itself was fractured in the following manner: the condyle was completely separated, and the fracture extended upwards to separate the posterior portion of the coronoid process; the sigmoid notch was in this way separated in the detached fragment. This fracture in the lower jaw was on the left side.

The teeth of the lower jaw:

The two central incisors are in place, the two lateral incisors absent, the two canines present, the four bicuspids present, the four molars present. A gap on each side between the last bicuspid and the first molar evidently indicates that he had lost the first molar; the wisdom tooth is in place.

(*ε*) The petrous portion of the left temporal bone was completely broken out; it was separated externally along the line indicated in (*γ*), and was also separated at its base. The line of separation superiorly is somewhat internal to the line of the petro-squamosal suture; the detached piece of bone carries the internal auditory meatus, the inner wall of the tympanum, portion of the jugular fossa, and the carotid canal.

(*μ*) The left occipital condyle is completely broken out by a line of fracture which extends through the body of the occipital bone anteriorly immediately in front of the condyle, and runs between the foramen magnum and the jugular foramen; from the jugular foramen it extends through the occipito-mastoid suture for one-half an inch, then changes its direction and passes backwards and inwards behind the occipital condyle, to terminate in the foramen magnum within one-sixteenth of an inch from the mid-point of the posterior margin of the foramen.

(*ν*) On the right side of the skull, the right occipital condyle is fractured almost directly transversely by a fracture which extends from the foramen magnum to the jugular foramen.

(*ο*) A fracture (very much in the same direction as (*μ*) but on the right side) extends from the posterior margin of the foramen magnum (at a point one-half an inch from the mid-point of its posterior margin) outwards and forwards to the base of the styloid process (to the occipito-mastoid suture); here it changes its direction and passes forwards to the jugular foramen, opening up the occipito-mastoid suture. Thus a piece of bone is here completely separated carrying the posterior half of the occipital condyle and the jugular process of occipital bone.

(*p*) At the junction of (*f*) and (*g*) a fracture continues forwards and inwards through the posterior wall of the external auditory meatus, and has separated also the portions of the glenoid fossa along the line of the glasserian fissure; the zygoma was fractured one-half an inch from (anterior to) the tubercle for the external lateral ligament of the lower jaw.

(*g*) The body of the sphenoid was broken through by a vertical transverse fracture separating the anterior portion of the body and opening up the sphenoidal cells. The lesser wings were broken off on both sides. On the left side the fracture passed through the sphenoidal fissure; on the right side the fracture was more posterior, and passed through the great wing of the sphenoid.

(*r*) The facial bones were entirely separated from the skull, leaving a large gap in the skull. The lines of fracture separating this portion of the skull (that is, the boundaries of the gap) are as follows:

In the first place, the fracture described as *q* (*i.e.*, a vertical-transverse fracture through the body of the sphenoid) forms its posterior boundary; on the left side the fracture extends forwards through the speno-maxillary and sphenoidal fissures, then along the line of union of the lesser wings of the sphenoid and the posterior margin of the orbital plate of the frontal on the left side. Then complete separation of the ethmoid bone, leaving the gap between the orbital plates of the frontal; then complete separation of the nasal bones from the frontal bone. On the right side a separation has taken place (like that on the left) between the orbital plate and the sphenoidal lesser wing; this continues through the temporal portion of the greater wing, to join the transverse fracture with which we commenced.

(*s*) A short fracture of seven-eighths an inch long passes inwards horizontally from (*a*); it begins in (*a*) three-quarters of an inch from the sagittal fracture. This fracture is more complete on the inner table, and reaches the sagittal suture completely on that surface of the bone.

Studying the fractures at the base as a whole, we find that there are five pieces of bone separated:

(1) The facial bones (leaving the gap described). This separated portion is again fractured into several pieces, which will be described separately.

(2) A piece of bone the integrity of which is preserved, including the greater portion of the body of the sphenoid and of its right greater wing; the lower portion of the right temporal carrying the root of the zygoma; the glenoid fossa; the external auditory meatus, and the anterior portion of the mastoid process—this fracture is crossed by fracture (*p*), but (*p*) is cracked, and the fragments do not seem to be completely separated; at all events, are not movable upon one another.

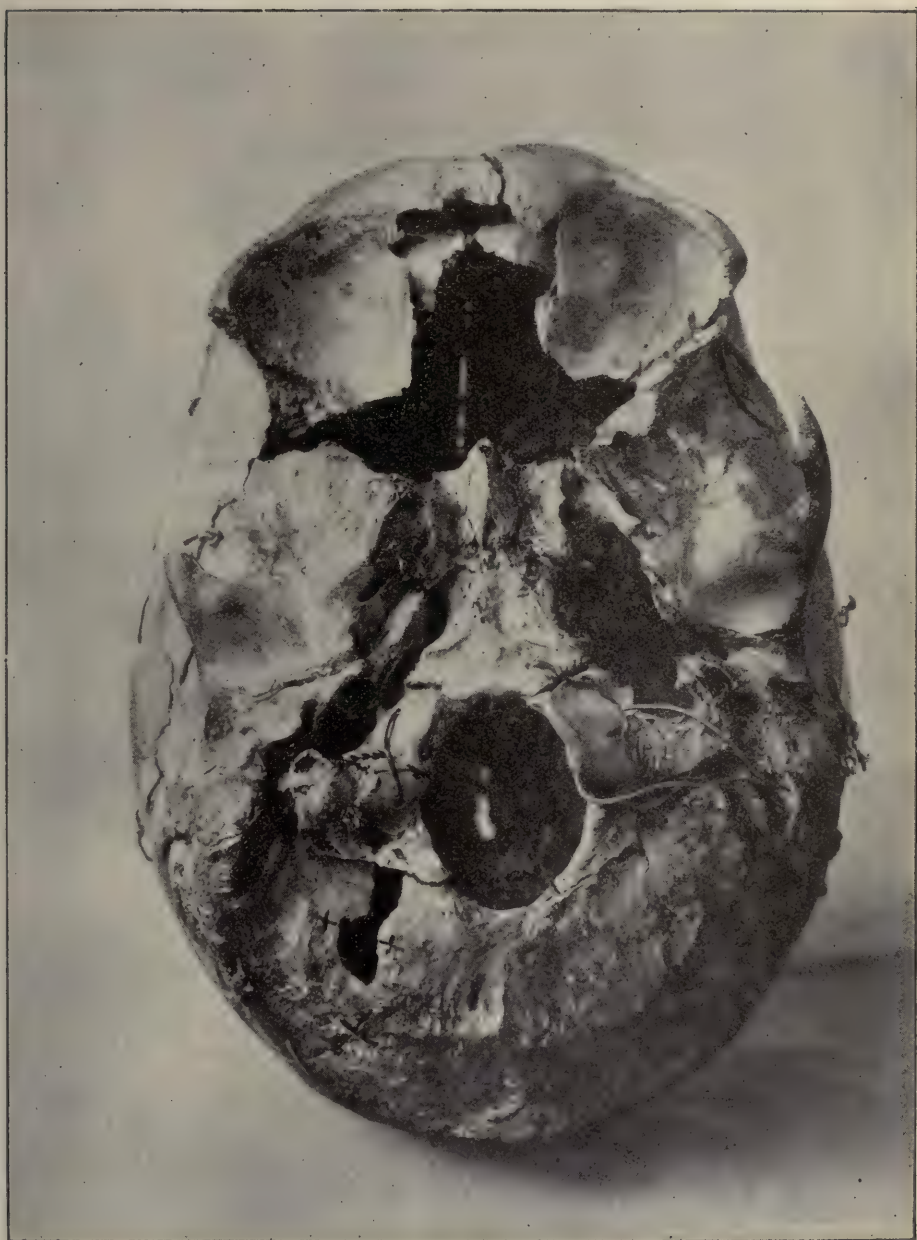
(3) The posterior portion of the right occipital condyle, plus the occipital jugular process.

(4) The left occipital condyle, the fracture bounding this having been described as (*m*).

(5) The petrous portion of the left temporal bone, the fracture bounding this having been described as (*l*).

NOTE.—The second piece of bone described above is bounded by the following fractures:

THE WELLS SKULL.



BASE.

- (1) The complete separation of the left greater wing of the sphenoid as described in (*j*).
- (2) The fracture through the body of the sphenoid (vertical-transverse) described in (*g*).
- (3) Fracture (*g*).
- (4) Fracture (*f*).
- (5) Fracture (*n*) passing through the right occipital condyle.

The Facial Fragments.

The right malar bone : This is separated at the sutures from the external angular process of the frontal bone, and from the zygomatic process of the temporal bone. The anterior part of the right zygoma, three-fourths of an inch long, is missing. The malar process of the superior maxilla is fractured through, the superior maxilla maintains its connection with the malar at the suture ; therefore, a piece of bone is completely broken off comprised of the malar plus the malar process of the superior maxillary bone.

About one-quarter of an inch of the right internal angular process of the frontal bone is completely broken off, and is missing.

The superior maxilla :

- (1) A fracture from the right malar at the point indicated above.
- (2) The right nasal process is broken off at its base, the line of fracture extending down through the margin of the orbit, through the infraorbital foramen, and inwards from that point to the nasal fossa in a horizontal direction.

The detached piece carries the maxillary portion of the lachrymal canal and portion of the inner wall of the antrum.

- (3) The left nasal process is broken off by a very similar fracture. The line through the orbital ridge, however, is slightly internal to the infraorbital canal.

- (4) The left malar has been separated at the line of suture of the superior maxilla with the malar.

- (5) A fracture directly through the alveolus in the middle line in front, completely separating the bone through its entire thickness into the nasal fossa. This fracture is exactly in the middle line between the central incisors.

- (6) A fracture through the palate process from the anterior palatine canal (continuance of fracture 5), passing backwards and to the right for about one inch.

- (7) A portion of the palate process of the superior maxilla and the horizontal process of the palate bone is entirely knocked out immediately internal to the alveolar process of the right side posteriorly.

There are no further fractures of the palate process.

- (8) The pterygoid processes of the sphenoid and the palate bone are completely separated on the right side from the superior maxilla, the separation taking place at the line of suture. The two superior maxillary bones and the palate bones remain intact along the line of suture in the hard palate.

- (9) The lower parts of the pterygoid processes remain in contact with the superior maxilla and the palate on the left side. The only portion of the left palate bone which remains connected with the superior maxilla are the horizontal plate and three-eighths of an inch of the vertical plate.

- (10) The inner, superior, posterior, and the greater part of the outer walls

of the left antrum are completely broken out, the fractures being along the corresponding surfaces of the bone.

(11) On the right side still more of the antrum and surfaces are broken off.

(12) The nasal bones are completely separated from the superior maxillæ. The teeth had been all present save the first molars, as evidenced by the fully developed sockets; and the atrophy in the alveolar process, with an indication of a socket at the site of the first molar, indicates that it had been present, but had been extracted.

The remaining facial bones are completely broken out, so that the lines of fracture cannot possibly be traced. The following bits of bone can be recognized:

(1) Nasal process of the right superior maxilla.

(2) The same of the left side.

(3) Portions of the great wing of the sphenoid of the right side carrying the orbital and part of the temporal surfaces, and part of the cerebral surface.

(4) A portion of bone carrying the lesser wing of the sphenoid of the left side, part of the orbital process of the frontal, some sphenoidal cells, and the optic foramen.

(5) A similar portion of bone of the right side.

(6) The portion of bone of the left side comprising a part of the orbital and zygomatic surfaces of the superior maxilla, plus the orbital plate of the ethmoid, and the maxillary and sphenoidal process of the palate.

(7) The petrous portion of the left temporal bone.

(8) The posterior and upper portion of the vomer, to which is attached a portion of the rostrum of the sphenoid.

(9) A portion comprising a part of the orbital surface of the ethmoid of the right side and of the orbital surface of the superior maxilla.

(10) A fragment comprising both nasal bones, which have not been separated from one another.

(11) Inferior turbinated bone of the left side, with some points broken off.

(12) Hamular process of the right internal pterygoid plate.

(13) A portion of bone with the alæ of the vomer.

(14) A portion of the spongy portion of the ethmoid.

(15) One styloid process.

(16) The lachrymal bone of the right side.

(17) Five portions of spongy bone unrecognizable, probably portions of the turbinated bones.

(18) The body of the hyoid bone.

(19) The right greater cornu of the hyoid bone.

(20) The lower and anterior portions of the vomer.

(21) Five separate teeth including the two canines, one incisor, and two bicuspids.

Viewed from the inner surface of the cranium, certain of the fractures run further on the inner table than on the outer. Thus fracture described as (*b*) instead of terminating at the same point on the inner side as on the outer, extends right across the coronal suture to join (*d*), when examined on the inner surface. Another indication of the greater extent of fracture on the inner side than on the outer side is in the fracture described as (*s*).

VERTEBRÆ.

The atlas, axis, the third, fourth, and fifth cervical vertebræ are all intact, no fracture nor abnormality detected.

Editorials.

THE ONTARIO MEDICAL ASSOCIATION.

THE hopes of the many who expected a highly successful meeting of the Ontario Medical Association were fully realized. The President and the various committees who had the work of organization in hand left nothing undone ; and the excellent programme was carried out without any accidents of any sort. A few who had promised papers, and whose names appeared on the programme, were prevented from putting in an appearance, but the supply on hand for every section was always more than equal to the demand.

Before the meeting we had much pleasure in referring to the energetic and judicious work of certain committees. The results of their efforts were very satisfactory in all respects. Drs. J. F. W. Ross and N. A. Powell are especially entitled to much credit for their labors in connection with the two committees over which they presided. The luncheon on the second day passed off very pleasantly, and the trip on the *Cleopatra* with Dr. Ross was very enjoyable.

We regret that our plethora of original matter for this issue prevents us from publishing the admirable address of the President, Dr. Bruce Smith, or the proceedings of the meeting ; but we are glad to be able to promise it in our next number. We desire to congratulate Dr. Smith, not only on account of the ability displayed by him in this address, but also on his dignified and judicious methods as a presiding officer. The meetings in the various general sessions ran their courses evenly and smoothly, without the appearance of the slightest ripple of unpleasantness.

NEXT YEAR'S MEETING.

THE meeting for 1896 will be held in the city of Windsor. This decision was not reached without very careful consideration. Since the organization of the society, in the autumn of 1880, the meetings have been held in Toronto, with two exceptions, in 1884 and 1885, when the meetings were held in Hamilton and London, respectively. For various

reasons it was generally considered, especially by those living outside of Toronto, that it was the best thing in the interest of the association to make Toronto the permanent place of meeting.

When the Committee on Nominations met, its members found a very kind invitation from the medical profession of Windsor, asking the association to hold its next meeting in that city. Accompanying this were two other warm invitations, one from the mayor, on behalf of the city council, and another from the president of the Board of Trade, on behalf of that body. The association had never been so highly honored before. The unusually kind and cordial invitations were repeated by Drs. Hoare and Coventry, of Windsor, who appeared before the committee. The members of the committee unanimously appreciated the kindness of the Windsor people, both professional and lay, but did not agree as to the desirability of accepting the invitation. Being nearly equally divided on the subject, however, it was decided, practically, to leave the matter till the general session in the evening, when the whole society might vote on it.

Many thought that as the 1896 meeting of the Dominion Medical Association was likely to be held in Toronto, it would be better to have the Ontario meeting in some other place. After a brief discussion, Windsor was chosen by a large majority. The minority cheerfully accepted the situation, and, we have every reason to suppose, will gladly unite with the majority in a great effort to make the meeting in Windsor a pronounced success.

THE INDEFINITE MEDICAL NOTE.

THE practitioner, to gain knowledge from the experience of others, should be possessed of accurate and clear information. To accomplish similar results—by following any one man's practice—one must first learn thoroughly his details of technique, etc. Medical journals frequently contain a department of "Notes," which is often a source of embarrassment to their readers and annoyance to the authority referred to. They speak in general, where definite terms should be employed. The following clipping from "In the Clinics" department of *The Philadelphia Poly-clinic*, May 25, p. 221, must be exceedingly useful to those in need of help:

"For a patient with *chronic urethral discharge*, Dr. Lindsay prescribed boric acid, ten grains three times a day, and an injection containing zinc sulphate, mercuric chloride, and boric acid in distilled water, to be employed two or three times daily. The patient was instructed to return in a few days, when a thorough urethral examination would be made so that the cause of his condition could be determined."

Surely in Dr. Lindsay's clinic they do not take a handful of several drugs and a pailful of *distilled* water!

CANADIAN MEDICAL ASSOCIATION.

MEDICAL conventions are exceedingly popular. They are, or should be, great educators, and the only way to make these meetings eminently successful is to attend and give the members the benefit of your experience. Physicians owe it to themselves and to their patients to keep abreast of the times, and in no way can they reap so much benefit at so little outlay as by attending these medical conventions.

The Canadian Medical Association will meet this year in Kingston, on August 28th, 29th, and 30th, and the reports received from the energetic secretary, Dr. F. N. G. Starr, lead us to believe that this will be one of the most successful of this association's meetings.

The president, Dr. Bayard, of St. John, N.B., will deliver his address on the first day. The address in Medicine is to be delivered by Dr. James Stewart, of Montreal; in Surgery, by Dr. I. H. Cameron, of Toronto. Eminent men from across the line—Drs. McCosh, New York; A. H. Ferguson, Chicago; and J. J. Price, Philadelphia—have promised to be present and assist in making this meeting a success.

Amongst others, the following have promised papers: Dr. W. S. Muir, Truro, N.S.; Wesley Mills, and F. Buller, Montreal; Edmund E. King, J. E. Graham, and A. McPhedran, Toronto.

The secretary will be glad to hear from any one who will contribute to the success of the meeting.

THE HYAMS CASE.

PERHAPS no previous criminal case has excited so great and intense interest in Canada as the Hyams case, recently brought to an unsatisfactory termination for the time being. The interest excited has been, if one may so speak, of various kinds. Life insurance men, elevator experts, and medical men have *special* reasons for giving the case their attention, in addition to those general considerations which attract them as part of the community. It is of the points that are of peculiar interest to the medical profession that we wish to speak shortly. The case may be stated in a word. A young man is found dead at the foot of an elevator shaft, and examination apparently shows that the head alone has been injured. No special examination having been made at the time the body was found, two years pass before suspicions of foul play were strong enough to call for further investigation. The body is then exhumed, and examined with as much minuteness as possible under the circumstances. The head alone is damaged, but the injuries to it are of such a character

as to completely destroy its continuity. A series of fractures is found which involve not only the vault, but the base and face also. Even the lower jaw has suffered. We publish with this number a complete technical description of the various lines of fracture, as also photographs of the skull ; but it has been thought not unadvisable to state in a more general and rough way what damage was actually found. The case is still *sub judice*, but a bare statement of facts is allowable.

The damages to the head may be put into three divisions : (1) Damage to the vault of the skull ; (2) damage to the base of the skull ; (3) damage to the face. It must be understood that the bones only will be referred to. The difficulty of treating of injuries to soft parts at such a length of time after infliction is great, and so much uncertainty as to their location and appearance has been proven to exist that we dismiss them altogether, and look only to those injuries of which the record is before us.

(1) *Damage to the vault of the skull.* For purposes of description, we speak of lines of fracture as *starting at* certain points and *running to* certain other points, not intending to assert that these are really the points of origin, etc., or that the order followed in description is that actually followed in production.

The vault of the skull is divided into two lateral portions by a line of fracture which, starting at the root of the nose and separating the frontal bone nearly evenly in the midline, then opens up the sagittal suture for about three inches, then jogs to the right side at right angles for about one inch, and finally runs backwards, outwards, and downwards through the occiput, and terminates in the foramen magnum to the right of the midline. (Unless otherwise specified, all lines of fracture spoken of pass completely through the thickness of bones.) Another line of fracture, which is a very striking one, runs through the frontal bone from side to side, parallel to the supraorbital ridges, and crossing that already spoken of at right angles. It begins in the right temporal fossa, and terminates in the coronary suture of the left side, an attempt, as it were, to divide the skull into an upper and lower half. The chief remaining fractures of the vault appear to radiate from the parietal protuberance on the right side, and, if certain of them be followed through their course, we make a third line of division of the skull as a whole into an anterior and posterior part. This line runs from ear to ear over the top just behind the vertex, passing through the right parietal protuberance on its way. Behind and below this transverse line of fracture we find another line, which runs from the right parietal protuberance straight to the tip of the occipital bone, and then upwards and outwards, to terminate in the transverse line spoken of above. Thus we have broken out from the back of the head a

fairly regular, lozenge-shaped piece of bone, composed of two triangles, base to base, in the sagittal suture, and taken entirely from the parietals.

(2) *Damage to the base.* The damage to the base was as widespread as to the vault. A feature that strikes one instantly is the fact that both occipital condyles are damaged, the left being broken completely out and the right fractured transversely across in the centre. On the left side a gap is seen in the base, running from behind forwards, and representing the situation of the petrous portion of the left temporal bone. This is one of the most noteworthy fractures of all, the dense piece of bone being cut completely out, almost as by an instrument. The greater part of the temporal bone of the left side—minus the petrous portion spoken of—has been separated from the other bones by lines of fracture running through the squamous part parallel to the suture, with parietal by-lines running down into the base and lines running fore and aft in the base. The zygoma on this side has been disarticulated from the malar, and remains attached to the temporal.

(3) *Damage to the face.* Both zygomatic arches are destroyed, the right by fracture and disarticulation, the left by disarticulation only. The malar bone of the right side is separated from the superior maxilla by fracture through the maxilla, just below the suture between the two. The superior maxilla of the right side is badly comminuted, the nasal process being completely separated and the antrum destroyed. The superior maxillæ are separated in the midline in front, and the fracture runs back through the palate on the right side. The left superior maxilla is also damaged, but not to so great an extent as the right. The nose is completely disorganized, all the bones being separated and more or less comminuted.

The internal angular process of the frontal bone on the right side has been broken off. (Great stress was laid upon this by some medical witnesses, as showing that a front blow had been struck, it being held that this fracture could not have been otherwise produced, looking to the condition of the skull as a whole.)

One very curious injury is a green-stick fracture through the left ascending ramus of the lower jaw. The break is from without inward, just across the neck of the articular condyle. There is no other injury to the lower jaw.

The ground taken by the Crown was that more than one blow was necessary to cause all the injuries found. The defence held that one crushing blow might have produced them, and that, if more had been inflicted, the record was destroyed by the crushing force.

Correspondence.

MEDICAL EVIDENCE.

To the Editor of THE CANADIAN PRACTITIONER :

DEAR SIR,—I have long been unfavorably impressed with the reports of medical evidence given in the daily press in connection with the various murder cases which from time to time come before our notice, and in speaking of the matter to other medical men I find I am not alone in the views I hold.

In the recent Hendershott case the expert evidence would have been of untold value to medical men, from a medico-legal point of view, had it been published in full ; but the meagre reports of the evidence of the various physicians called by the prosecution and defence were, to put it very mildly, scarcely satisfactory.

At the present time we have the Hyams case engaging the attention of the public, and in this case also the question of the guilt or innocence of the accused will largely turn on the expert medical evidence, and I feel safe in saying that the published reports of this evidence in the daily press will be quite as unsatisfactory as in previous cases.

A possible way out of the difficulty which has occurred to me would be for the medical journals to publish the medical evidence in full, and I feel satisfied that this would meet with the approval of a great number of physicians, readers of the journals, throughout the country.

I thought I could not do better than write to you, as editor of the most widely read medical journal in Ontario, asking if it would be possible for you to comply with my request, wholly or in part ; and I am sure, if you can see your way clear to do so, that your action will be hailed with satisfaction by every reader of THE CANADIAN PRACTITIONER, interested as he or she must be in such matters, from a purely scientific standpoint.

HERBERT W. ARMSTRONG.

Fergus, May 14, 1895.

Medical Items.

DR. WILLIAM PEPLER, of Toronto, was married June 12th.

DR. CHARLES A. TEMPLE was married in Toronto, June 12th.

DR. C. A. MCBRIDE, of Oakville, sailed for England, June 6th.

DR. CHOWN, of Winnipeg, recently spent a few days in Toronto.

DR. JOHN AMYOT, of St. Joseph Street, was married this month.

DR. B. T. MILNER, of Toronto, was married in Brampton, June 8th.

DR. CRAWFORD SCADDING, of Toronto, was married in England, June 6th.

DR. HARRIS has removed from West Toronto Junction to McCaul street, Toronto.

DR. BERTRAM SPENCER has been appointed an associate coroner for the city of Toronto.

DR. JOHN R. STONE has been appointed an associate coroner for the district of Parry Sound.

DR. MAX KLOTZ, of Ottawa, and Mr. J. H. Ferguson, of Aylmer, have been appointed resident physicians of the Hospital for Sick Children for the ensuing year.

DR. ERNEST M. HALL, of Vancouver, B.C., has been elected a Fellow of the British Gynæcological Society, and has returned home after a protracted visit to Germany.

DR. EDMUND E. KING attended the annual meeting of the American Association of Genito-Urinary Surgeons, held May 25-27, at Clifton House, Niagara Falls, Ont.

DRS. J. E. GRAHAM and A. McPhedran, of Toronto, attended the meeting of the Association of American Physicians held in Washington during the last week of May.

DR. J. C. WARBRICK left Toronto, June 10th, for England, where he expects to remain one year. He will probably spend an additional year on the continent before returning to Canada.

DR. G. STERLING RYERSON has been appointed the representative of Trinity Medical College in the Senate of the University of Toronto, in the place of Dr. John L. Davison, resigned.

DRS. ALBERT MACDONALD and Allen Baines, of Toronto, and Dr. Welford of Woodstock, attended the meeting of the American Pædiatric Society at Hot Springs, Virginia, during the last week of May.

DR. D. A. DOBIE, who left Toronto last fall to practise in New Orleans, remained in the latter city five months ; but, finding that the climate was likely to disagree with him, he recently returned to this city, and resumed practice at his former residence, McCaul street.

THE Nominating Committee of the Medical Faculty of Queen's University met and made the following appointments : Dr. Wood, to be assistant to Dr. Fowler, professor of medicine, and to be professor of sanitary science ; Dr. Anglin, to be assistant to Dr. Sullivan, surgery, and to be professor of medical jurisprudence.

MESSRS. WM. R. WARNER & CO. have removed their New York branch to the more commodious and convenient quarters, No. 52 Maiden Lane. This change became imperative, the space at their former salesrooms having at last become inadequate to admit of the proper conduct of their largely increased business

THE CENTENARY OF THE DISCOVERY OF VACCINATION.—The directors of the German Vaccine Institute are arranging a festal celebration, to be held in 1896, in commemoration of Jenner's discovery of vaccination. It will take place on the occasion of one of the annual meetings of medical men. In connection therewith there is to be an exhibition of old and new vaccine instruments, of apparatus for the preservation of lymph, etc., original manuscripts on smallpox and vaccination, on the inoculation of sheep-pox and cattle plague in pre-Jennerian days, of squibs on vaccination, medals, portraits, and autographs of prominent inoculators, vaccinators, anti-vaccinators, etc. Persons willing to lend objects for exhibition are requested to communicate with *Geh. Med. Rath.*, Dr. L. Pfeifer, President of the Vaccine Institute of the Grand Duchy of Saxony, at Weimar.

THE PATRONS.

"Nemo," Lucknow, sends me the following communication :

Dear Flaneur,—I have been studying poetry and the position of the Patrons of Industry ; so I compose the following verses, which, to enlighten the world of Canada, you might perhaps print, as it would be a pity to lose the beautiful effusion :

The gallant Mowat leads his party on,
And Patrons nothing from him yet have won !
Lately they met, in battle's bloody shock,
The Patrons led by thundering, fierce Haycock.
They joined in battle o'er that doctor's bill,
Patrons determined doctors all to kill.
The conquering Mowat raised his sword on high,
And smote this Patron phalanx, hip and thigh.

MORAL.

All flesh is grass ! So doth the Scripture say,
And grass, when cut and dried, is turned to hay.
If Death, to Patrons all, his scythe should take,
Oh, thunder ! what a " Haycock " they would make.

—*Mail and Empire.*

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EDITOR:

ADAM H. WRIGHT, B.A., M.D. Tor.

ASSOCIATE EDITORS:

JAMES F. W. ROSS, M.D. Tor.

JOHN CAVEN, B.A., M.D. Tor.

EDMUND E. KING, M.D. Tor.

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Original Communications.

ADDRESS OF THE PRESIDENT OF THE ONTARIO MEDICAL ASSOCIATION.*

By R. W. BRUCE SMITH, M.D.,

Resident Physician at Orchard House, Hamilton, Ontario.

CONFORMITY with the custom that attaches to the position which, by your partiality, I have held during the past year makes it requisite that I should address you on this occasion. If I were to consult my own wishes, I would not consume any of your valuable time. I cannot, however, disregard the usage that is coeval with the existence of such an organization, composed of medical men from every portion of our fair province.

My first impulse is to express to the association the high appreciation I feel for the honor conferred upon me in being selected to preside over this meeting. I can only repeat the statement that I made at the time of my installation in this position last year, namely, that I realized that the honor was intended more particularly for the part of the rural section of

*Delivered at the meeting held in Toronto, June, 1895.

which I was then a resident than as a recognition of any service I had rendered in promoting the interests of the association. Although I have very frequently, during the year, wished that some one more richly endowed with the wisdom which more advanced age and experience confers had been chosen, I can assure you that the many evidences of confidence and acts of courtesy I have received in the discharge of my pleasant duties will long remain a precious memory. As one of the youngest ever chosen to fill this position, I have continually felt the necessity for guidance and dependence upon those whose more mature years and professional experience so well qualified them to advise and direct. To those who have so generously assisted me in the discharge of my duties my sincere thanks are most heartily tendered. The work necessary in preparation for such a meeting as this is full of interest and instruction. It has, necessarily, given me a broader and clearer insight into the forces and motives which underlie our professional work, and I have been more impressed than ever with the strength and importance of the Ontario Medical Association, and the important place it holds in maintaining the present standing and determining the future development of the medical profession in this province. The interest which has been manifested in every meeting of the association since its formation is convincing evidence of the fact that the worth of such an organization is appreciated. Our annual meetings have fostered the devotion to scientific investigation and engendered a mutual respect and good feeling among the members. The bill of fare set before you at this meeting reflects great credit on the committee, whose members have been untiring in their efforts to provide a programme at least equal to any other in the history of the association. The special committee in charge of the arrangements has, as its report indicates, left nothing to be desired. My grateful appreciation of the labors of these workers cannot be adequately expressed.

Many of those who have preceded me in this position have, in their annual addresses, been called upon to pay a tribute of respect to the memory of some past president of the association. It is a melancholy fact that many of those who have been honored with this office have ceased from their labors and are at rest. He who two years ago presided, with characteristic grace, over the deliberations of this association is missing from our gathering to-day. I refer to the late Dr. R. W. Hillary, of Aurora, who died in October last. Known, as the deceased was, to many members of our association as a worthy and upright man, and an honor to the ranks of the profession he adorned, no words of mine are needed to add lustre to his memory.

In the early years of this association, when much of its future success depended upon the foundation upon which the organization rested, we

were favored with the services of a most energetic secretary, whose zeal might be described as almost boundless. The name of Dr. J. E. White will not soon be forgotten, as one to whose earnestness for the welfare of this association much of its present strength is indebted. His very sudden death, a few months ago, was deeply regretted by the large circle of friends his geniality had won for him.

The influence which is exerted by such a meeting as this is manifold. To the profession at large it gives unmistakable evidence of an ever-increasing interest in everything pertaining to scientific progress, and such a gathering never fails to exercise an important influence on the elevation of professional character, as well as on the advancement of professional attainments. Much of the charm of these meetings is the prospect of greeting those we have known before. One of the important functions of this association, while discussing the products of experience in the great fields of surgery and medicine, is to prove a meeting place where friend meets friend, and, if necessary, buries the asperities which, through no fault of his own, may have interfered with their cordiality. It is only a few years ago since the lives of doctors were all much the same, and the development of their ideas, feelings, and sentiments took place through much the same environment and experience, and, in failure or success, they came in contact with the world at large through much the same points of contact. The change has been, particularly in Canada, very gradual; but now many doctors lead most different lives, and are developed under the most diverse and different conditions. The specialist, in his well-appointed office, with his definite time for labor, and his hours of undisturbed rest, to be employed as his tastes and inclinations may direct, can hardly enter into the feelings of those who hold themselves in readiness to answer a summons at any hour of the twenty-four. The laryngologist, his life spent in a darkened room, his vision limited to the length of his reflecting mirror and his view confined to the illuminated spot, resembling in size the gold piece which will be the reward of his skill and dexterity, is not likely, as time goes on, to fully understand the trials and triumphs of the man in general practice, who passes from stone front to shanty, from alley to suburb, through mud and snow, and who is likely to turn, without a moment's notice, from measles and whooping-cough to gout and broken bones. It must not be forgotten that both are doctors, doing their work within the limits which personal preference or chance may have thrown them. This entire difference of condition and surroundings must surely have its effect upon the feelings and sentiments and character of the future man of medicine—and there will be doctors and doctors. The professional character of to-day finds that its feelings and its sentiments have been largely developed under the old-time similarity of

work, and there is already indisputable evidence that the present phase of professional life finds itself somewhat ill at ease with many of the ideas and customs of the old *régime*. It is for such a gathering as this to bind together all the diversifying elements and combine in our programme all the phases of professional work. We come together once a year to see each other, to hear each other, and to know each other in our different lines of work, and to become familiar with that personal tone and character which can only be done by personal contact. The Ontario Medical Association, established, as it was, fourteen years ago, for the cultivation of the science of medicine and surgery, the advancement of the character and honor of the medical profession, and the promotion of unity and harmony among its members, has enjoyed a most successful career, and the gathering to-day may be taken as a pleasing augury for increasing prosperity. It has outgrown its infancy, and entered upon adolescence with bright expectations of vigorous maturity.

The temple of medicine is constructed with slow and calm deliberation, and many stones laid in the first flush of a fancied new discovery have had to be rejected when thoroughly tested by subsequent clinical experience. Time and experience are alone able to demonstrate the soundness or frailty of our workmanship. What is characteristic of these modern days, so far as medicine is concerned, is the high place we assign to the study of the origin of disease. Of one thing we may be sure, and that is that we are learning that it is better to avoid the causes of disease than to remove their effects, and that good hygiene is preferable to therapeutics. We must be chary, however, of going to an extreme likely to encourage skepticism. The antidotal treatment of fevers now receives more attention than is paid to the so-called antipyretic nostrums, many of which, on account of their heart-depressing effects, have been relegated to obscurity. During the past year the question of serum-therapy has become of such transcendent importance that some predict we are now on the threshold of one of the most beneficent discoveries since Jenner's immortal victory. From the introduction of the germ theory, associated with the names of Lister, Tyndall, and Pasteur, names familiar wherever the rays of modern civilization have penetrated, has come the science of bacteriology. From this study of microbic pathology modern medicine is evolving what at present promises to be one of her supreme triumphs. Never in the history of medicine was there such hopefulness that, in the light now breaking, there may be seen the sure and certain pathway by which immunity from the so-called zymotic diseases may be achieved. If serum-therapy demonstrates its usefulness in this way, it will justly be regarded as one of the most brilliant triumphs of the genius of man. True, we cannot always be certain whether the light on the horizon is the sign of dawn, or merely a "Will-o'-the-wisp" to lead us into realms of still greater

uncertainty. The clearer light which we are now looking for with hopeful expectancy will, perchance, scatter the shadows which other heralded panaceas have created.

The influence on the nervous system from the administration of desiccated thyroid glands has, during the past year, led to some very interesting observations on the effect of thyroid feeding in some forms of insanity. Some very instructive cases have been published by Bruce, of Edinburgh, in which some of the results have been as gratifying as they have been astonishing. The effect in some of the cases has kindled a hope that we may be about to see the fulfilment of the result anticipated and expressed by Clouston, when he said : " I think we shall some day be able to inoculate a septic poison and get a safe and manageable counter-irritant and fever, and so get the 'alterative' effect of such things, and the reaction and stimulus to nutrition that follows febrile attacks." Certainly, psychological literature is full of the records of cases which made good recoveries after suffering from exanthemata, carbuncles, erysipelas, and inflammations generally. If the effects of thyroid feeding prove of lasting benefit, there is certainly an excellent field in which to prove its usefulness.

Professional interest has recently been considerably awakened in the subject of auto-intoxication. Putrefactive processes in the intestinal canal and the development of physiological and pathological alkaloids play an important part in many diseased processes until lately unknown or misunderstood. The pathological chemist has vied with the bacteriologist in demonstrating to us the efficacy of intestinal antiseptics.

In the field of surgery the growth and development of the science of bacteriology has practically worked such a revolution that to-day no young practitioner is regarded as thoroughly equipped for surgical work who is not something of an expert bacteriologist. Surgical pathology was never more zealously or successfully cultivated. Therapeutic surgery is, along the line of antiseptics, making rapid advancement, and rendering more sure the work of the knife. Operative surgery is adding one brilliant success to another, and commands the admiration of the world to a degree never before attained.

Perhaps none too soon are we able to detect, as we most assuredly are, the strong conservatism in the surgery of the female pelvic organs. Man's pelvic extremity is now perhaps in greater danger than woman's. It remains to be seen whether recent suggestions for the cure of the enlarged prostate will prove as successful in results as they now appear heroic. Brain surgery is claiming large attention, and a degree of progress is being attained which is, year by year, adding to the triumphs of the art. In whatever direction the surgeon may look to-day the prospect is gratifying, and, with due regard to the caution gleaned from experience, he may justly be animated to strive for still wider achievements.

The relation which medical men bear to the community, and the special nature of their life-work, is, I believe, becoming better understood and esteemed by the public. There is now every reason, founded on unmistakable evidence, for believing that greater interest is manifested by the laity in medical work, and in some instances in Canada we have seen tangible expression of that feeling displayed in donations for the furtherance of bacteriological research. Such instances show that the public does not altogether lose sight of the efforts made to remove or avoid the causes of disease by endeavoring to understand their origin. "Immunity from disease" is a theme for which the public has ever an attentive ear. We must not grow weary in well-doing, but remember that our first and paramount duty is to teach man to know himself—teach him all the laws of health, and set before him the consequences that are sure to follow their violation. Teach him what we now are certainly assured of regarding the hereditary nature of disease, and exhort him to avoid everything likely to encourage premature decay either to himself or his offspring. Let us be captains and generals—take the position of guides and directors. Point out the way to health and happiness, and urge man to walk therein. Teach man, if he is a moral leper, his body will be leprous; if he is a glutton, his earthly house will be filled with refuse and become unhealthy and decay early; if he is a libertine and sensualist, that his unholy indulgences will surely show in a rotten and polluted body; if he is a drunkard, his form is sure to reel and stagger, and his body to undergo degeneration, ending in early decay. Whatever he is internally will, by a law of correspondence, act outwardly, and show itself in his body either for good or for evil. It is our duty to stand by man in all his waywardness, and, although our warnings be unheeded, we must be ever ready to extend a helping hand and endeavor to restore the decaying parts. Armed with the best appliances and materials for our work, we may by their judicious and prompt use be instrumental in restoring this wonderful mechanism—the human body—to its pristine beauty and usefulness, and feel somewhat deserving of the Homeric commendation :

"A wise physician skilled our wounds to heal
Is more than armies to the public weal."

The very radical amendments to the Ontario Medical Act proposed during the last session of the legislature would, if adopted, have placed our profession in a most undesirable position. While some assert that the pruning knife might with advantage be applied to lop off a few twigs from a tree which none deny has borne good fruit, there are fortunately few who would encourage applying the axe to the root of a system whose very existence is a protection to the public and a safeguard to the profession.

The recent attack upon the Medical Council may, however, be productive of more than one useful lesson. Many who supported the pro-

posed amendments were probably induced to take that course more from reading the severe criticism bestowed by correspondence in the public press upon the Medical Council than from the influence which a certain few specially interested individuals could have exerted. The Medical Council to-day enjoys the confidence of the profession to a greater extent than ever, and the increased territorial representation will probably silence the fear that the general practitioners throughout the province have not the influence in the council to which they are justly entitled. The power of the Medical Council to discipline any practitioner found guilty of disgraceful or unprofessional conduct, and to erase (subject to appeal to the courts) the name of such from the register, must continue to be exercised, but the necessity for applying such punishment will, I trust, soon become a rare occurrence. Let the great body of the profession pronounce with no uncertain voice, through the local and county societies, that all irregular methods of seeking or obtaining practice and notoriety is unprofessional, derogatory to the interests of the profession, and injurious to those of the public. Let all our medical associations exclude men who do such wrongs from all lists of members, and let the excluded know why they are so excluded. The tone of the profession will then begin to improve, and men who enter it saturated with "the spirit of trade" will become alarmed and will be led to think ; and, above all, let the united voice of the profession express the opinion that a broader preliminary education shall be deemed to be essential for every man to enjoy before he enters upon the special study of medicine. We may then with some confidence feel assured that the professional spirit will grow and acquire a force which will relegate "the trade spirit" to its proper place—which is secondary to the professional—and then the Discipline Committee, unfortunately now a necessity, will be seldom called together. The Royal College of Surgeons, England, has only been compelled to discipline out of its large membership ten during the past six years. May we not strive to emulate that record?

The clause of the Ontario Medical Act allowing medical practitioners in the different territorial divisions to form a tariff of fees has been repealed. There are now three courses open for adoption :

- (1) Let the Medical Council arrange a tariff for the whole province.
- (2) Let the practitioners of each county meet together and form a tariff.
- (3) Let us do without any medical tariff, as some of the United States are at present.

There is much to be said in support of each of these courses. Personally, I am inclined to favor medical men of each county forming an organization, in order to agree upon their own tariff of fees. Some county societies have been in existence for many years, and are doing good work. The fact that those counties in which regular medical societies are sus-

tained always send the largest representation to our Provincial and Dominion association indicates the influence of local organizations in fostering and developing a true professional spirit. If the members of this association will return from this meeting imbued with the determination that a live county organization shall be maintained, and if to these meetings, held quarterly, are brought and discussed some of the interesting cases that have recently engaged the attention of the members, the result would be most marked, and instead of having one or two clinical centres each county would have its own specialists in every department of medicine. The existence of these local societies would no doubt lessen the existence of envying jealousies and heart-burnings, fault-finding and traducings. Then we might hope that each member would be so engaged in the effort to improve himself, and elevate his own position in the profession, that he would have no time in which to study his neighbor's faults, much less to accurately scrutinize and publicly herald his seeming defects. As it is now, the slightest imperfection of a professional brother is sometimes magnified into such Gargantuan proportions as to completely obscure any really good qualities or attainments that he might actually possess, and thus the entire profession is injured in the estimation of the public by the rivalries, bickerings, and jealousies that exist among its members. The greatest of all teachers left us, briefly summarized in "the Golden Rule," the best of all codes of ethics, and the sooner the members of our profession are banded together more firmly in fraternal spirit, the more nearly will we be able to accomplish our great mission in life. Do not imagine that I am dreaming of a professional Utopia, "where every prospect pleases" and even man's not vile. There will be in every Eden a serpent. There seemingly must be those who with the outward semblance of honesty cover dishonorable characters; but we can through local organizations make the manifestation of such dishonesty unpopular. We can educate the public to a belief in the reality of our professions and the nobility of our art. There are enough physicians in this province, to whom their profession is dear, to render the prospect for the future assuringly hopeful. In no way can the standard of our profession be better elevated than by the organization of local societies where the co-laborers can be brought together, and thus learn to sympathize with and respect each other. The strongest hope lies in the fact that, throughout the general profession in this province, there is an increasing love for advancement along the lines made perfect by careful study. It is evident that if the right administration of remedies implies a knowledge which study alone can give, and also a knowledge of the meaning of symptoms, the educated man alone can treat disease, and the ignorant must fall into obscurity, quackery will die a natural death, and the millennium of medicine will be at hand.

DISCUSSION IN SURGERY—DELAYED UNION IN FRACTURES.*

BY GEORGE A. PETERS, M.B., F.R.C.S. ENG.,

Associate Professor of Surgery and Clinical Surgery, University of Toronto ; Surgeon Victoria Hospital for Sick Children, Toronto ; Surgeon Extern Department, Toronto General Hospital.

IN assigning as the subject of the "Discussion in Surgery" the question of "Delayed Union in Fractures," your Committee on Papers had in view the fact that while rapid and brilliant advances have recently been made in the more attractive fields of abdominal, pelvic, and brain surgery, our knowledge of the repair of injuries in bones, and the best methods of treatment to bring about such repair in a rapid manner and with a satisfactory result, is little in advance of the times of Pott, Liston, and Syme. It can scarcely be that we have reached the ultimate degree of perfection in the treatment of these cases, because we occasionally—though, fortunately, not frequently—see results following fractures which are not satisfactory, either as regards the appearance of the limb, or as regards its utility, and in a few cases we may fail to get any union of the injured bones whatever. The latter result, viz., non-union, does not occur, according to Hamilton, Liston, Malgaigne, Norris, and other authorities, more than once in five hundred cases. Dennis claims to have seen 10,000 cases in which not one case of non-union ultimately occurred, though several required operation. But cases of the condition now under discussion, viz., delayed union, are much more common. We apply the term "delayed union," then, to those cases in which the fragments of the bone remain unattached to one another several weeks beyond the time usually requisite to bring about perfect restoration of the continuity of the broken bone. Very often without any extraordinary treatment union ultimately takes place in these cases, and they are thus rescued from classification in the deplorable list of ununited fractures ; but such a narrow limit marks the boundary between the two classes that, in consideration of the one, we find ourselves necessarily overlapping the domain of the other.

Fortunately for us, and for our patients, in the vast majority of cases, union of fractured bones takes place in a perfectly normal manner. But this leads us to enquire into the reason why, in the exceptional cases, a

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contrary condition prevails. Recent investigations, so far as I am acquainted with them, throw no additional light on the subject, and the causes given in all our text-books are those to which we must still give our adherence. The limited time at my disposal prevents my dealing with etiology, except as it may be incidentally mentioned in speaking of treatment, but I would beg to draw the attention of the association to the fact that there have been reported cases of delayed union, and even of non-union, of broken bones occurring in young, strong, healthy subjects, without any constitutional taint, where the fragments were in good apposition, and the treatment correct in every particular. Porter, Packard, and others have recorded such cases. In other words, delayed union sometimes occurs in cases in which *a priori* reasoning would lead us to expect rapid and perfect healing. The knowledge of this should make medical men careful not to let fall unguarded remarks in the hearing of patients so suffering, for many of them are only too ready to enter suits for malpractice.

Having in view this fact, and remembering that such apparently trivial and often unavoidable circumstances as the intervention of a fragment of bone, a strand of fascia, or a torn muscle, may determine delay, or non-union, is it any marvel that one is never called upon to treat a fracture presenting any unusual or unfavorable features without seeing in it a possible—even though not probable—source of trouble, chagrin, or vexatious, and perhaps ruinous, litigation?

The ultimate result of any fracture in which, from any cause, constitutional or local, union is delayed must be one of three:

- (1) Either spontaneously, or as the result of treatment, osteoplastic activity is at last set up and perfect union takes place, with full restoration of function, and a normal comely appearance.
- (2) Union may occur under similar conditions, but with a shortened, bent, or unsightly limb as the result.
- (3) Union by bone may refuse to take place, a false joint forms, or fibrous union takes place with greater or less impairment of utility.

THE PREVENTIVE TREATMENT OF DELAYED UNION.

While one cannot doubt that such constitutional dyscrasie as scurvy, syphilis, debility, and anæmia, arising from any cause, have an unfavorable influence over repair in bones, I think it cannot be successfully denied that in the vast majority of cases in which union does not take place kindly there is some distinctly local cause for the perverse condition. Such local causes may be in relation to:

- (1) The nature and extent of the injury.
- (2) Imperfection of apposition of fragments at time of reduction.

(3) Some failure in the working of the retaining apparatus, or other flaw in the after-treatment.

In regard to the nature of the wound nothing perhaps is in itself so conducive to non-union as actual loss of bone substance, as in some gunshot wounds. Apart from this, the chief reason why compound fractures are more unfavorable than simple is that incidentally germs of suppuration will, in all probability, be carried into the wound and set up their baneful action. If it were possible in such cases to prevent suppuration, the mere fact of a wound of the skin communicating with the fracture would not, to any appreciable extent, delay union of the bones.

While it would be presumption on my part to attempt to give a systematic account of the treatment of fractures to this audience, and would be entirely out of place in this paper, yet I find it incumbent upon me to express some opinion upon the setting and general conduct of such cases as from their nature or character are liable to become instances of delayed union.

In passing, I may interject the opinion that when the local conditions are such as to excite the apprehensions of the surgeon as to the ultimate result, he should, where possible, secure his own safety in case of litigation by consultation with a fellow practitioner as to the line of treatment to be adopted, as well as in reference to the prognosis given to the patient. Another advantage of having skilled aid is that an anæsthetic may then be given, if found necessary. And here I beg to enter a plea for the more general use of anæsthesia in the setting of all, except the simplest, cases of fracture. In compound fractures, in fractures where there is great entanglement of the fragments in the soft parts, and where spasmodic muscular contractions are present, the surgeon is greatly hampered in making a diagnosis of the character of the fracture and in bringing the parts into correct apposition by the cries and expostulations of the agonized patient. Under such trying circumstances, the surgeon is too apt to content himself with an unsatisfying examination and an imperfect reduction, in the ill-founded hope that extension, or the restraining action of the splints, or the moulding power of the muscles will bring the parts into good apposition when the spasm has passed off.

Under anæsthesia, however, the surgeon can usually satisfy himself as to the character and direction of the fracture; he can tell whether the fragments are or are not in correct relation to one another; and he feels no hesitation in putting the limb below the seat of the fracture through those very extensive movements which are sometimes necessary to disentangle the lower fragment from the muscles or fascia, or, what is still more difficult, to draw the soft parts off the sharp point of the upper fragment, which sometimes pierces muscles, fascia, and even skin.

In compound fractures the surgeon may, if necessary, take advantage of the wound to explore with the surgically clean finger, and, where found necessary, the wound should be enlarged so as to allow room for the manipulations or incisions necessary to extricate the fragments from the soft parts and to bring them properly together.

If facilities are at hand for doing so with strict asepsis, I think it is justifiable to cut down upon the seat of injury in the case of simple fractures, if it be found that perfect reduction cannot be achieved by any manipulative process. I am of opinion that the instances where so-called subcutaneous division of an obstructing band of fascia or muscle is justifiable are extremely few, and certainly, if such band is in the line of important vessels or nerves, an open operation is infinitely preferable, as being safer and more accurate.

The question of wiring, pinning, or securing with screws is an important one, but I think it will be conceded that, if the fragments are once brought into accurate apposition with one another, the tendency to redisplacement is not very great, and that a properly fitted splint is sufficient guarantee of permanence in the majority of cases. Of course, in fractures of the olecranon, the patella, and the lower jaw, some metallic restraint is in good position almost an essential in order to get bony union, but in the case of long bones, where the conformation of the part is favorable to the use of splints, any more intimate retentive apparatus is seldom required.

Having set the fracture and applied retentive apparatus, we must now inquire how in any given case the surgeon in charge can ascertain whether the normal processes which result in the welding together of the fragments are going on or not. All are agreed that meddling surgery, like meddling midwifery, is bad. It certainly is injudicious and unjustifiable to remove the splints at frequent intervals, and test by flexions and rotations the degree of union that has taken place. Undoubtedly great harm may result from such interference. In fact, such meddling curiosity has, in itself, frequently been a cause of non-union. On the contrary, it is unwise to set a fracture once for all at the time of injury, and then never remove the splints until it is expected they may be left off permanently. It is difficult to state in a general way what rule should be followed in regard to this matter. Much will depend on the nature and seat of the injury. To be as definite as the general character of the question will allow, I consider that it is good treatment to loosen the splints and examine the seat of the fracture within the first forty-eight hours. (If there is burning pain in the skin under the splint, over bony prominences, or elsewhere, this should be looked to as soon as complained of, otherwise a slough may occur.) It is true that there will not be much diminution of the initial swelling, and the tenderness will be great at this exami-

nation, but muscular spasm will have passed off. Any gross deviation from the normal length or continuity of the bone may be detected, and the necessary readjustment made more easily than at a later period. Throughout the whole course of the treatment thereafter, it appears to me a wise measure to remove the splints every four, five, or six days, according to circumstances, so as to expose the seat of the fracture for a few moments, at least, to the sunlight and air, and to subject the skin and muscles to a light friction and massage in order to prevent what has been very aptly called "local scurvy." Now I wish particularly to state that this must be done without permitting any movement whatever of the fragments upon one another, and I would most strongly deprecate any idea of "testing" the degree of union by bending or rotating the limb. Such testing can do no good whatever, it rarely gives any reliable information to the surgeon, and it may be productive of very great harm.

If, while handling the limb, the surgeon feels distinctly a large formation of callus, it is to a certain degree reassuring, but its absence or small amount does not by any means prove that union is not progressing, for we know that the better and closer the apposition of the fragments the less is the amount of callus produced.

I believe, of course, in passive motion, but, if passive motion cannot be done without risking the union of the bones, then I say wait, and take chances on the movement of adjacent joints. Usually, when the bones are firm one can gradually restore the utility of the joints; but if you fail to get union of the bones, what becomes of the joint? You then have that worst of all combinations—a stiff joint with an ununited fracture in its immediate neighborhood.

In the treatment of fractures due regard must be had to the element of time, and the surgeon should devote his whole skill and attention to the proper treatment of the case, and scrupulously avoid all "testing" of the strength of the union until such a length of time has elapsed that he may reasonably expect that union will be perfect. If it should unfortunately happen that union has not taken place, the surgeon will experience a great disappointment, and the unwelcome news will come as a great shock to the patient, but the former will have nothing to reproach himself for, and the shock to the latter would not have been lessened by two or three weeks of disquieting apprehensions resulting from the suspicion of the unsatisfactory progress of his case that would have been excited by repeated testings.

But there are also some cases in which, even after the full time has been allowed for treatment, and where union is apparently firm, it is found that the callus is soft and yielding, and that it has not become fully ossified. In the case of bones of the upper limb, no ill result may follow

the use of a limb in this condition. The moulding power of the muscles, and that admirable adaptive power of nature which tends to the restoration of injured parts to their original form, may serve to keep the limb from warping, or may restore it gradually to its natural shape if it has become bent. But in the lower limb, which has to bear the weight of the body, a very disfiguring degree of bending may take place in a short time. This teaches us that we should make careful note of the shape and length of the limb when the splints are removed, and the patient is allowed a limited use of the limb. The limb should also be inspected a short time after the weight has been put on it, and, if it is found to be yielding, the splints should be reapplied in such a manner that elastic pressure may be used to bring the fragments again into a straight line.

If, however, after the lapse of five, eight, ten, or twelve weeks, depending on the bone affected, the surgeon should find on examination that union has not occurred, what course of action is he to adopt? It is well not to get into a panic in such cases, because, as has been pointed out, union is sometimes delayed a few weeks beyond the usual time without any obvious reason, and then equally without obvious reason reparative action sets in and a satisfactory result ensues. But if the watched-for and longed-for result does not arrive, the surgeon feels that he must do something. Some fifty years ago Sir William Fergusson declared that he would do almost any reasonable thing rather than cut down upon the seat of fracture as White of Manchester had done, and though we are, with good reason, less afraid of making wounds than they were in Fergusson's day, yet the boldest of us will scarcely dare claim that there is no danger in such an operation. In the earlier stages of delayed union, at all events, milder measures may be adopted. Constitutional measures should not be neglected, though I need not enter into details regarding this point.

In regard to local treatment almost any method which is effective in exciting inflammatory action at the seat of fracture will be effectual, provided distinctly that the ends of the bones are in apposition. Perhaps the most effectual and most readily applied measure is by rubbing the ends forcibly together. There, too, I would strongly advise anæsthesia, though some authorities hold that it is not necessary. If the attempt to excite reaction is made at all, let it be vigorous and energetic. No make-believe rubbing of the ends will be of any service. The limb should be flexed, extended, and circumducted at nearly a right angle to the normal axis of the limb, and these movements should be made with a force and vigor amounting almost to violence. In that way, if the bones were not in apposition before, they may be brought together by wearing away the bands or fibres, or the new tissue that may have formed between the bones.

After such treatment the retentive apparatus must be reapplied, and Thomas recommends tight bandaging above the fracture so as to increase the swelling and congestion at the part. Some recommend plaster of Paris splint, but if the fracture is in such a situation that any other form of splint can be applied in such a way as to secure perfect immobility, while, at the same time, leaving the seat of the fracture exposed to the light and air, that is the form of splint to be recommended. If, however, it is found on moving the bones freely that they do not grate against one another, such manipulations will probably be unproductive of good, and the proper course will be to cut down upon the part and proceed to such cutting measures as will serve to bring the bone surfaces together. Moreover, the seat of the fracture may be in such a situation that violent manipulations might endanger the integrity of adjacent vessels or nerves, as, for example, in the middle third of the humerus, where the musculo-spiral nerve lies in immediate contact with the bone. Here an open operation is greatly to be preferred. For similar reasons, I think the subcutaneous drilling and irritation of the ends by the methods of Dieffenbach and Brainard are to be condemned. I do not deny that benefit often results from such drillings, but I think they should be done with the ends of the bones exposed by incision. Every surgeon of experience knows the perverse tendency of drills to slip from the object against which one thinks he is directing them, and to plunge blindly into adjacent parts, perhaps with disastrous consequences.

TREATMENT OF CASES OF LONG STANDING, OR SO CALLED NON-UNION.

In cases of long standing it is often difficult to know whether to advise operation or not. Sir W. Fergusson relates a case in which a man had such a useful arm, though it was the subject of a false joint, that he passed a searching examination as a recruit and was accepted for the army, and I have in my mind at the present moment a case in which there is ununited fracture of both bones of the forearm, with such slight impairment of function, that the man is able to earn his living as one of the crew of a steam thrasher.

Each case must be decided upon its own merits. Much depends upon the age of the patient, the bone affected, and the utility of the limb. For example, an ununited fracture of the upper end of the fibula may be perfectly innocuous, and even in case of the humerus there may be almost no impairment of function whatever.

In the endeavor to be as definite as possible, I would say that in the case of a young man, otherwise in good health, with an ununited fracture of the upper extremity, and almost perfect utility of the limb, though I would not *urge* operation, I should be willing to undertake it after fully

explaining the risks, dangers, and uncertainties of the results. If the arm were useless, or comparatively so, I should certainly advise the operation, even in a middle-aged or elderly man. In advanced years, however, with fair utility of limb, I should be inclined to refrain from interference.

In the lower limb I think we should be more aggressive, and should always attempt to get bony union by operative procedure. Even here, however, by means of a close-fitting leather or rawhide casing, the limb may often be made to support the body and perform its functions surprisingly well, and cases are recorded in which union ultimately took place after such an appliance had been worn for more than a year. The operative procedure in a case of old-standing is very different from that which is appropriate to a more recent case. In the former any treatment would be inadequate which stopped short of a free open incision with the removal of the false joint, the pointed or rounded ends with closed medullary canal which have resulted from a rarefactive osteitis, or the fibrous bands which remain as the abortive results of the attempt at the formation of callus. It is obvious that such an operation must result in a shortening of the bone. This makes little difference in the humerus, and it can be compensated for in the case of the femur, but, in the case of ununited fracture of one bone of the forearm or leg, it may necessitate the removal of a section of its unbroken companion, so as to make both bones of the same length. This, of course, adds very materially to the gravity of the operation, and must be allowed due weight in the consideration of the advisability of recommending any operation at all. After such operation the bones may be held in position by wiring, or by means of screws. Time will not permit, however, of my going into details as to the mechanical treatment.

In this paper, Mr. President and gentlemen, it will have been observed, perhaps with disfavor, that I have not given any lists of causes or lines of treatment. I have not quoted authorities, though I have consulted them extensively in preparing the paper; I have not brought forward a single new thing; but I have tried to outline in a brief and imperfect way what I consider to be the best way to avoid delayed union in the treatment of fractures, and the measures best adapted to restoration of osteoplastic activity when delay has occurred.

CHRONIC SEMINAL VESICULITIS.*

BY EDMUND E. KING, M.D. TOR., L.R.C.P. LOND.,

Surgeon to St. Michael's Hospital; Physician to House of Providence and Home for Incurables; Pathologist, Toronto General Hospital.

IN a paper so short as this must needs be, to deliver in ten minutes, it is impossible to go very deeply into the pathology of seminal vesiculitis. The disease is a common one, and, following, as it so frequently does, gonorrhœa, we naturally expect that the acute stage will be overlooked by many of us, and the symptoms, according to traditional teaching, attributed to the spread of the inflammation to the prostate and neck of the bladder.

In my opinion, we have described the symptoms produced by the spreading backward of gonorrhœal inflammation as due to cystitis, prostatitis, abscess of the prostate, etc., etc., while in reality they have, in the great majority, been results of seminal vesiculitis; and when the over-distended vesicles have evacuated themselves, we have been satisfied that, for example, the prostatic abscess has burst and resolution begun. This disease presents three stages—acute, subacute, and chronic. I do not intend this morning to refer to any but the chronic cases, and illustrate them by three or four successfully diagnosed and treated cases, in which sufficient time has elapsed to justify the use of the word “cure.” Other cases under treatment at the present time are fully meeting the expectations, and will likely be reported in due course.

The anatomy. The seminal vesicles are sacs, situated along the outer border of the base of the bladder, folded on themselves, and present an irregular, inverted U-shaped tube or sac, with the blind end and neck of the sac very close to each other. The vesicle is about two inches long as it lies—twisted—attached to the base of the bladder, and in close communication with the rectum, only separated by the loose areolar tissue. The length of the sac when straightened out is about six inches, the width of the sac varying in size according to its collapsed or distended condition.

* Read before the Ontario Medical Association, Toronto, June, 1855.

Jordan Lloyd (*British Medical Journal*, April 20, 1889) asserts that they are the analogues of the Fallopian tubes. (This is true anatomically, but not histologically.) The seminal vesicle opens into the vas deferens, just at the border of the prostate, forming the ejaculatory duct which penetrates the prostate gland, and opens by a valve-like slit in the prostatic sinus, one on either side of the verumontanum.

The vas deferens, which on rectal examination is often mistaken for the seminal vesicle, is the communicating canal from the testicle to the penis. This canal, eighteen to twenty-four inches long, dilates into the ampullæ about four inches from its union with the seminal vesicles, and lies along the base of the bladder, nearer to the middle line than the vesicles, and may readily be mistaken for them. In health, it is almost impossible to differentiate these organs, although in the distended and diseased conditions they are quite readily made out.

The function. The function of the seminal vesicles is not clearly defined. That it secretes an albuminous fluid which dilutes the testicular secretion, that it acts as a reservoir for the semen, is admitted by most authorities, yet disputed by some, these latter holding that the vas deferens dilating into the ampulla can and *does* retain the semen, and that the mixing of the two fluids takes place at the time of emission. We have not time to discuss this subject in the present paper.

The symptoms. The seminal vesicles being the anatomical analogues of the Fallopian tubes, it is clear that seminal vesiculitis and salpingitis are analogous diseases. They are rarely or never primary diseases, but are secondary to some inflammatory trouble, and, in a large percentage of the cases, it is a common factor—gonorrhœa—that produces both.

We will here pass over the acute and subacute cases, and direct our attention simply to the chronic ones. The patient will complain of symptoms similar to those produced by stone, or prostatitis—frequency of urination, accompanied by pain either in the neck of the bladder or head of the penis. Some pain, of a greater or lesser intensity, on evacuating the bowels, especially if the movement is hard and accompanied by straining. A discharge from the penis after defæcation. A sense of bearing down and desire to strain on micturating. Erection may be frequent and painful—priapism—and of such severity that it alone is sufficient to cause the patient to seek advice, while, on the other hand, it may be ephemeral, and, on an attempt at coition, simply fail at the start. The increased frequency of micturition at night or after exertion or long walks is very marked. Throbbing and a burning sensation is frequently felt in the rectum. A slight discharge occurs from the meatus in the morning, and occasionally a copious discharge, without any apparent or exciting cause. (In acute cases this is a symptom that is classed by the patient and some

physicians as a relapsing clap.) These symptoms are easily explained as a result of a posterior urethritis, while the improbability of the infection spreading through the capsule of the prostate or into the tissue around the bladder is apparent when such easy access is open to the vesicles.

The diagnosis. In most cases coming under notice it is quite likely that the symptom will direct in the order of examination. After you have excluded those diseases whose diagnosis is made out without actual examination, turn your attention to the rectum, and palpate the prostate and vesicles.

The vesicles should be examined while the bladder is full, the patient standing on his feet, with his body bent at a right angle across the arm of your office chair. It is not necessary that an enema be previously used, as this would empty the bladder and prevent thorough examination. It is frequently necessary to press with the disengaged hand against the pubes while the finger is in the rectum, to carefully map out the distended vesicles. The finger must be carried well up, the ball of it pressing forward toward the bladder, and the vesicles or dilated vas mapped out with its lateral movement. The patient is directed to urinate in two vessels; the first will contain whatever fluid has been squeezed out of the vesicles, and should always be examined by the microscope; the second vessel will contain clear normal urine, if there is no inflammation existing in the bladder.

The literature and teaching. The authorities have, as a rule, either ignored the condition or treated it in such a casual manner that their readers have never seen the importance of the subject. Gouley, in his treatise on "Diseases of the Urinary Apparatus," devotes one whole chapter to the subject-heading of gonocystitis, or phlegmasia of the seminal vesicles. In Morrow's "System of Genito-Urinary Diseases," etc., Paul Thorndyke, of Boston, contributes the chapter on this disease, but in the older authorities Van Buren and Keyes, Bumstead and Taylor, dismiss the subject with a very few words, and nothing on treatment but rest. Milton dismisses the subject in a few lines, and of treatment he says: "I can say nothing worth the reader's attention," p. 229, ed. 1887.

Sir Henry Thompson appears to be on the right line when he says of prostatic abscesses: "Abscesses supposed to be prostatic are not infrequently external to the prostate and not within the envelope of the organ; and are, in fact, peri-prostatic." He has omitted any explanation of the symptoms or of defining the exact location of such abscess. Jordan Lloyd, of Birmingham, has contributed two very interesting and complete monographs on the subject (*British Medical Journal*, April 20, 1889; *Lancet*, October 31, 1891); Fuller, of New York, in an elaborate monograph read before the Genito-Urinary Association of America, in 1893,

and one before the New York Academy of Medicine; Gardner Allen, of Boston, in a monograph before the Boston Medical Society, etc., etc.

John K., æt. 44, from Western Ontario. Neurasthenic. History of gonorrhœa twenty years ago; also syphilis, and a moderate varicocele on left side. The patient complained of pain at the end of penis, at the neck of the bladder, at the completion of micturition. Frequency at night; would have to arise four or five times each night. The movement of the bowels was accompanied with a painful, burning sensation just within the anus, and also a discharge from the meatus. This was more marked if he was constipated. He had been examined for stone, and the bladder washed frequently for the symptoms of apparent cystitis. The patient was referred to me by Dr. W. P. Caven in October, 1894. After taking note of the history and examining the urine, one long shred was observed floating around. This, when placed under the microscope, showed numbers of dead spermatozoa and some small pus cells. The urethra was free from coarctation, and the bladder examination revealed nothing. The prostate was next examined and found somewhat enlarged, about twice its normal size, and soft, but the seminal vesicles were found to be very much swollen and boggy, excessively tender, and, by a massage and specially-directed pressure, fluid was squeezed out, of sufficient quantity to drip from the meatus. The first ounce of urine passed after the manipulation contained over two drachms of *débris*, chiefly mass and pus and dead spermatozoa. The pain was, evidently, very severe, for the patient was much exhausted after the examination. I advised a continuance of the stripping process, and deep injections of silver nitrate, but his own physician in the West did not thoroughly take in the directions, and the treatment was very indifferently carried out. He passed out of my notice until February of this year, when he again presented himself for treatment, having, in the meantime, been at Battle Creek, and treated by some electric urethral method, with no good result. I insisted on carrying out the treatment myself. In March I began systematic stripping of the vesicles, followed by nitrate of silver injections every fourth day. He rapidly improved. The frequency of micturition subsided to once each night; pain on bowel movement disappeared, and all the other symptoms vanished. He had only ten applications, and I operated on the varicocele at the same time, with cure. On May 27 last I examined him, and, after stripping the vesicle, not a shred nor particle of *débris* was found in the urine.

Mr. F., Stratford. Has a very severe varicocele. Five years ago had first gonorrhœa, which he says was cured. In January, 1893, the patient says that a relapse occurred, although I would say another infection took place. Used treatment with apparent benefit; yet in October, 1893, while at the World's Fair, the symptom increased, and he took bals.

copaiba and ol. santal. Up to this time no symptom other than those attributable to gonorrhœa appeared; but in January, 1894, a sense of fullness and pain in the lower part of the rectum was noticed, followed quickly by a frequency of micturition. The pain was also referred to the end of the penis while micturating, and very severe at neck of bladder immediately after the act. Stone was suspected, and he was sounded with negative result. The symptom increased in severity and frequency, and a viscid discharge was apparent after movement of the bowels. His physician suspected ulceration of the neck of the bladder, and irrigations were used without effect. He was sent to me, and, on making a rectal examination, the true state of the case was made out. The vesicles were much enlarged, swollen, and distended. Very tender on slight pressure and almost unbearable on pressure severe enough to strip the vesicles. The quantity of discharge was one and a half drachms the first time, and three drachms the second, after which it gradually diminished, and is now perfectly cured.

Both of the above cases had a varicocele, and in each I operated with perfect results. There can be no connection between one and the other though. In the first case the sexual desire was blunted, a loss of confidence, and failure to complete the act. In the second case erections were very frequent and annoying, but there is no history of impairment. The third case was one of more than passing interest, and was sent to me on account of a very large prostate and the accompanying symptoms.

Mr. C., æt. 70; hale, hearty, and vigorous. Had symptoms of frequent and painful micturition for past ten years; during the past four months arising ten and twelve times each night. The passage of a catheter was frequently very difficult and always attended with great pain. Twice, once two months before I saw him, and once a year before that, he had complete retention. There was a history of gonorrhœa some fifty years ago. On examining the prostate it was found very much enlarged, but soft and boggy. The vesicles and ampullæ of the vas were much swollen and tender. It did not strike me as a suitable case for operation—at any rate just then—and I advised a course of massage and stripping. The advice was followed out, and for two months I regularly massaged the prostate and stripped the vesicles—a marked improvement being noticed in all the symptoms. The prostate now, for months after treatment, has ceased, is very little larger than normal, and the vesicles are barely discernible. The frequency has decreased to twice, and occasionally three times, per night.

Treatment. Dr. Eugene Fuller, of New York, deserves the credit of bringing this subject more fully to the attention of the profession and *defining* the method of treatment; but the process originated with Reliquet,

who reported the matter in the *Gazette de Hôpital*, 1879. Gouley also advised emptying the vesicles, but with much more frequency. The method that I have adopted is almost identical with that of Fuller, and the success has been gratifying. I order the patient to have a free movement of the bowels on the morning of the day I see him, either by a purgative administered the night previous, or by enema in the morning. He is to see me while the bladder is full, if possible; in some of these cases only an hour, while in others four or five hours, may elapse between micturitions. Then have the patient standing up and bend the body at a right angle over the chair arm. The first finger, or more preferably the first and second fingers are well soaped and greased and carried into the rectum with the ball of the finger toward the base of the bladder, and exercise pressure with lateral movement over the swollen and tender vesicles. It will frequently require considerable upward pressure to reach above the upper border of the vesicles, and with short fingers it is not possible. If you cannot reach above, it will not prevent you from emptying the vesicles. On account of their shape—that of an inverted U—the manipulating of the closed end of the sac will force the contents around the loop of the U, but, of course, the upper part will not receive the benefit of the pressure. After these lateral movements have been carried on for two or three minutes, the pressure should then be directed to the process of stripping—that is, pressure from above downward to express the contents through the ejaculatory duct to the urethra. As I said in one of the histories, it is frequently sufficient to cause fluid to flow freely from the urethra during the manipulation. Instruments have been devised by Glen, of Nashville, and others, to reach higher up the rectum, and allow of perfect stripping, but no instrument is as sensitive or as accurate as the finger tips, and I am dubious about their usefulness. The patient is now directed to urinate in two vessels, for the purpose of allowing the surgeon to appreciate the diminution of discharge, and thus measure the degree of success attained.

It has been my habit to inject twenty to forty minims, with the deep urethral syringe, of various strengths of silver nitrate, from five to twenty grains to the ounce, commencing with the weaker one. Just how much value these are in the cure I am not quite satisfied. I am not sure whether the manipulations have caused the valve-like slit of the ejaculatory duct to remain open and allow any fluid to enter the vesicles; but, from the sensations complained of by the patient for an hour or two in two cases, I believe that sometimes the fluid enters the vesicles. The frequency of these séances should not be oftener than every fourth day, and, after the first four, the interval might, with benefit, be increased to a week. The frequent manipulations may easily excite an acute inflammation, with serious consequences. Allan, of Boston, reports a case of bad results

following too frequent manipulation. It is not necessary to have your patient lie up, but rather beneficial to have him around.

The conclusions I would draw from the foregoing are :

- (1) That seminal vesiculitis is an analogous disease with salpingitis.
- (2) That it is of very frequent occurrence.
- (3) That it is the so-called cystitis, prostatitis, and prostatic abscess that follows gonorrhœa.
- (4) That, with proper treatment, it is a curable disease.
- (5) That it is easily recognized per rectum.

61 QUEEN STREET EAST.

A VISIT TO THE SARANAC LAKE SANITARIUM.

By J. E. GRAHAM, M.D., M.R.C.P. LOND.,

Professor of Medicine and Clinical Medicine, University of Toronto; Physician to the
Toronto General Hospital, and St. Michael's Hospital.

NOW that so much attention is being paid to the management of tuberculosis, your readers may be interested in a brief sketch of the Saranac Lake Sanitarium.

A party of four, Mr. Gage, Mr. Miller, the architect, Dr. Powell, and the writer paid a short visit to Saranac in the early part of June. The Adirondacks are easily reached after a few hours' pleasant journey from Montreal. Unfortunately, on the day of our visit the thermometer registered 90° in the shade, and our impressions may have been influenced thereby. I must confess, however, to a preference for our own Muskoka as a summer resort. The temperature of the Adirondack region in the winter ranges about the same as in Muskoka. The sanitarium is made up of a central administration building, a pavilion, an infirmary, and a number of cottages. The latter vary in size, some accommodating two, some four, and one as many as ten patients. The dining-room and kitchen are in the central building.

The cottage which seems most in favor is one for four patients. It is built of wood on stone foundation, and contains five rooms, one a large general sitting-room and four bedchambers, which open directly off the sitting-room. Free circulation of air is allowed by large open transoms, and in some instances by a large space existing between the upper line of the wall and the ceiling. In the latter way the cottage is made to resemble a bungalow made up really of one large chamber separated in rooms by partitions eight or nine feet high. The newer cottages, beautifully furnished, are bright and cheerful; some are heated by hot water, and others by stoves. Those more recently erected will shortly be provided with bathrooms and water closets.

I fancy that life in these cottages might be made delightful if the occupants were genial companions of the same social position. In any case,

the patients spend the greater part of the day in the open air, or in the pavilion, so that the nights only are spent in the cottages. The pavilion is a large building enclosed on every side by sliding glass windows, which can be easily opened or closed, thus protecting the interior from the cold winds, while at the same time free access of fresh air is permitted. Heat is provided by a large coal stove, but steam or hot water would be preferable. Patients in the pavilion are practically in the open air, and during the winter time they may be often seen playing billiards while wearing their overcoats and gloves.

A cottage is set apart for the infirmary, which is made up of a large sitting-room and six bedrooms. When from any cause a patient requires to remain in bed, he or she is sent to the infirmary, and remains there until the acute attack has passed off. A trained nurse, the only one in the sanitarium, has charge of the hospital. The inmates in the cottages are able to look after themselves.

All the patients in the cottages must necessarily go to the central dining-room for their meals, both in summer and winter. They are provided with waterproofs and overshoes, so that the weather is to a great extent disregarded. I heard the same remarks in this respect at Saranac as I heard emphasized by Dr. Dettweiler, at Falkenstein, during my visit to that sanitarium three years ago, viz., that the weather has very little effect upon those who constantly breathe fresh air. Dr. Hance informed me that pneumonia is very rare, indeed, in the sanitarium, there having been but three cases in five years. Catarrhal affections are certainly not more frequent than in the ordinary communities.

We had the pleasure of dining with the patients in the large central dining-room. The meal was made up of varied, substantial, and well-prepared food, and reminded me very much of that at Falkenstein and Leysin. Patients are allowed light refreshments in their cottages, as milk, beef tea, etc.

The ordinary well-known remedies for tuberculosis—cod-liver oil and creasote—are used in suitable cases, and tuberculin is administered to a few.

The main features of the treatment are life in the open air, good, liberal feeding, and an amount and variety of exercise suited to each case. Douches and massage are also given. In the summer time many of the patients sleep in tents, but none in the open air.

The complete freedom of the air from contamination by tubercular bacilli is an important point. I was told that, in a great number of experiments, similar to those of Dr. George Cormet's, dust scraped from the floor, walls, and furniture, mixed with water, was injected under the skin of guinea-pigs.

It is altogether probable that the air of the sanitarium is much more free from bacilli than that of the ordinary dwelling. This fact is of great value, as it proves that, under proper regulations, the disease may be rendered quite innocuous, so far as the attendants on the patients are concerned.

The success of treatment may be roughly given as follows :

Twenty-five per cent. cured.

Twenty-five per cent. much benefited.

Twenty-five per cent. slightly benefited.

Twenty-five per cent. unimproved.



By the word "cured" is meant a return to the former health and a complete absence of bacilli from the sputa. Relapses may occur in any of the cases.

These statistics agree very closely with those published by Dr. Dettweiler, of Falkenstein, who found twenty per cent. of his patients living and in fair health ten years after they left the hospital.

One of the most important buildings in connection with the sanitarium is the laboratory, which is situated in the village, near Dr. Trudeau's residence, about a mile and a half from the cottages. Although not large, it is probably the best arranged and most complete for its purpose of any on this continent. It is certainly the cleanest and kept in the best

order of any which I have visited. Very little odor, or even closeness, could be detected in the animal room. One cannot go through this building and be shown some of the work done without feeling that here discoveries may ultimately be made which will be of the greatest importance to the human race.

The sanitarium as a whole, the common-sense methods of treatment based on our present knowledge of tuberculosis, the patient enthusiasm of Dr. Trudeau and the other medical men in charge, as they continue quietly their investigations from year to year, all impress one with the importance of the institution and of the great good which is likely to flow from it.



The history of the sanitarium is full of interest. Dr. Trudeau commenced work about twenty years ago by the erection of a small central building and two cottages. There is now accommodation for over eighty patients. The buildings have been erected by voluntary contributions, and the sanitarium is supported in the same way.

The moderate charge of five dollars a week is paid by each patient, or by the society or municipality which sends him. The cost of maintenance is seven dollars a week. The sanitarium is thus intended for the comparatively poor, and is a purely benevolent institution.

Wealthy patients live in cottages or hotels in other parts of the Adirondacks. I was surprised to find so large a number of the latter class in this

region. Many of the liberal donations to the sanitarium have been made by wealthy people who, having spent months in the neighborhood, were able to judge of the excellent work done. One of the largest was a gift of \$17,000, the cost of the laboratory, and some of the cottages were built by single individuals.

One of my objects in writing the present article is to endeavor to awaken a greater interest in this matter among members of our own profession. Owing to the generosity of two of our citizens, Mr. Gage and Mr. Massey, and to the encouragement given by both the Dominion and Ontario governments, as well as by the two great railway companies, we are now in a position to state that the building of an institution in this province similar to that of Saranac lake within a year or so may be confidently relied upon. I am quite convinced that we shall find in Muskoka situations equally as good as those in the Adirondacks. Now that we can regard the establishment of such a sanitarium with certainty, its growth and development will depend largely upon the interest taken in it by the profession.

One of the first requisites will be a physician of ability, energy, and judgment, one who has had an excellent training, and who is willing to devote his life to the care of patients in the hospital and to the study of the disease.

One cannot visit the Saranac sanitarium without noticing the important part Dr. Trudeau has had in its success. The importance of such an institution is not altogether in the number of patients treated, which is necessarily limited. The educational influence which it will exert on the profession and public will be of the greatest value. Our ideas both as to the pathology and management of tuberculosis are now undergoing great changes, and there is still much to learn. An institution, therefore, near at hand and always open to the inspection of the profession cannot fail to exercise an important influence in our ideas of the care and management of patients throughout the province suffering from the disease. We are really beginning under much more favorable circumstances than Dr. Trudeau, and if we can only attain to his measure of success we shall be satisfied.

In conclusion, I hereby express the thanks of our party to Dr. Trudeau and Dr. Hance for their kindness and courtesy during our short visit.

The accompanying pictures of the main building, pavilion, and cottages were taken from photographs which Dr. Powell made when there.

EXPERIMENTS ON MOTILITY IN BACTERIA.

BY HIBBERT HILL, M.B.

A SERIES of experiments undertaken to determine the relation between the possession of motility by bacteria and their ability to penetrate wet cotton has given the following results :

(1) Motile bacteria penetrate wet cotton in any direction readily ; the rate of passage varying for different species with the relative activity of their motility.

(2) Non-motile bacteria pass *downward* through wet cotton readily.

(3) Non-motile forms *may* pass *upward* through wet cotton, but such passage is very slow—from some days to two or three weeks.

(4) Aerobic forms which are also motile may utilize their motility to resist gravitation ; so remaining at or near the surface of a liquid medium exposed to oxygen.

The method of investigation was as follows :

(1) U-tubes of glass were made, filled with ordinary bouillon, plugged, sterilized, and tested in the usual manner. Inoculations made into one arm from either motile or non-motile bacteria yielded free growth in the second arm in a very short time.

(2) Similar U-tubes were then made ; ordinary surgical absorbent cotton was introduced into one arm and packed into the lower end, just above the commencement of the bend. Bouillon was then poured into one arm, and aspirated through the cotton into the other, so as to fill both arms and saturate the cotton thoroughly. After the usual plugging, sterilizing, and testing,

(a) Inoculation of non-motile forms into an arm containing cotton resulted in free growth on the other arm soon after.

(b) Inoculation of non-motile forms into an arm not containing cotton required some considerable time before growth was discernible above the cotton in the second arm.

(3) Straight tubes, stopped at the lower end with rubber corks, were filled with bouillon ; surgical absorbent cotton was thrust half-way down the tube into the bouillon. Inoculations into the bouillon above the

cotton with *non-motile* forms resulted in the deposition on the cork below the cotton of a large amount of the growth obtained. With motile forms, however, the chief growth occurred *above* the cotton, which served as a sharp line of demarcation between a dense opacity above and comparative clearness below.

(4) Test tubes prepared, and cottoned, as already described, on one side only or on both sides, showed marked growth on both sides in a short time when inoculated in either arm with a motile species.

(5) Test tubes, prepared as in No. 4, were inoculated in one arm with an aerobic motile species. A thumb was placed over the mouth of the second arm, and sterile bouillon poured into the first until it was filled. The cotton plug was reinserted and the top sealed with wax. On removing the thumb from the second arm no flowing of the bouillon could now take place. In such cases the growth which developed was almost entirely in the second arm, above the cotton.

(6) Tubes prepared as in No. 5, but inoculated in the arm exposed to the air, showed very little growth in the sealed arm, but, of course, quite free growth on the inoculated side.

(7) In both 6 and 7, on removing the wax, thus allowing once more free access of oxygen to both sides, the amount of growth on each side became rapidly equal.

These experiments might be made of practical use in demonstrating the results of motility in class work, and in distinguishing certain allied species which differ in the activity of their motion. It is intended to continue work in this direction, and to attempt an answer to some of the numerous problems suggested by the results so far obtained. The particulars of the various experiments will be published later.

SPECIAL NOTE.

A new method of differentiating *bacillus typhi* abd. and *bacillus coli communis*, based on the relative activity of their motility:

At the suggestion of Dr. H. D. Pease, Fellow in Pathology at Johns Hopkins, one of the results of the foregoing experiments was applied to the differentiation of *bacillus typhi* abd. and *bacillus coli communis*. Test tubes were prepared as already described, special care being taken to ensure that the length and tightness of the cotton to be traversed was the same in all cases. Four tubes were inoculated with *bacillus typhi* abd., four with *bacillus coli communis*. The tubes were incubated at 37° C. for fifteen hours. On examination, the second arm of all the tests inoculated with *bacillus typhi* abd. were found cloudy, those of the *bacillus coli communis* being clear. The inoculated arms of all the tubes showed free growth. Secondary inoculations were made from all the second arms, with the result

that those from bacillus typhi abd. developed, the others proving sterile. A second experiment with similarly prepared and inoculated tubes gave growths from secondary inoculations from the second arms of two tubes of bacillus typhi abd. in twelve hours.

The glass tubing used was $\frac{3}{8}$ inch in diameter. The attempt was made to obtain a greater uniformity of results by packing a definite weight of cotton ($\frac{1}{2}$ gram) into a definite length ($1\frac{1}{2}$ inches) of such a tube.

Clinical Notes.

EAR COMPLICATIONS IN LA GRIPPE.*

BY E. J. BERNSTEIN, M.D.,
BALTIMORE, MD.

IF the experience of other aurists has been as mine, this present epidemic has been unusually prolific of serious secondary disease in the ear, some of which have assumed very curious types, and with me one I had rarely seen before. It is a secondary mastoiditis and purulent otitis media. Ordinarily there are two classes of cases, the one presenting symptoms of naso-pharyngeal catarrh, the other representing the disease itself, localized in the ear. It is a subdivision of this latter which calls for some remarks—symptoms simulating acute gastric catarrh to such a degree that only after several days of suffering would the aural complications be brought to light. The chief characteristic of ear symptoms in influenza, contrasted with other acute infectious diseases, is the intense hyperæmia entirely disproportionate to the conditions usually seen. This congestion is also the indirect cause of the complications observed, first, because in the weakened walls of the blood vessels it tends to rupture and hæmorrhage; secondly, because it lights up afresh any inflammation already healed; and thirdly, it renders the mucous membrane highly susceptible to the reception of any other conveyers of disease. Otitis media acuta suppurativa generally begins with sticking, tearing, or boring pains in the ear, spreading out over the frontal and occipital region. In children the pain is more intense than in adults, though in the latter it seems almost unbearable. Usually the pain exacerbates towards night, and in the morning the patient may become quiet and sleep several hours; either bodily or mental exertion increases pain. In very intense inflammation, slight conjunctivitis, œdema of the lids, and photophobia are present before the rupture of the drum. High fever, nausea, unconsciousness, and convulsions are concomitants, and of such a degree as often to lead one to suspect meningitis, or beginning exanthemata, with cerebral symptoms. Should we

* Abstract of a paper read at a meeting of the Maryland Clinical Society, March 29th.

neglect to examine the ear often, we are only made cognizant of the aural character of the malady by the purulent discharge when the violent character of the illness subsides, showing the cerebral symptoms to have been caused by acute otitis media. When the mastoid is involved, we have great pain and tenderness upon pressure, and the posterior and superior walls of the meatus are hyperæmic. The peculiar set of symptoms to which I wish to call your attention will be best shown by the history of a typical case. The patient has had an attack of la grippe, more or less severe. During the height of the disease, or while convalescing, typical symptoms of acute gastric catarrh supervene—headache, nausea, foul breath, furred tongue, and great discomfort. Pain in the head and stomach are naturally severe, and exacerbate with approach of night. After several of such days, the ear begins to discharge and patient mends. The attention is directed to the ears, and great tenderness over the mastoid and tragus are found. The case may now progress favorably as regards pain, or the latter, after a short remission, may again become severe, and we then have a regular mastoiditis. As to the treatment, I need hardly say that when this is directed to the ear, the gastric symptoms promptly give way to medicines which were before powerless. The usual treatment for acute otitis media is to be followed. I should call attention, however, to careful syringing. The all-rubber bulb syringe is far preferable to the piston syringe. I have also found hydrogen dioxide of great help in cleansing the ear, as it gets into portions of the tympanic cavity, unattainable by syringing, unless you use the Hartman's cannula. In mastoiditis, I make use of cold applications or an ointment of belladonna, camphor, and mercury, and only use Wilde's incision when the inflammation does not succumb to these remedies.

Progress of Medicine.

OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

Professor of Obstetrics in the University of Toronto; Obstetrician to the Toronto General Hospital.

ASSISTED BY

H. CRAWFORD SCADDING, M.D.,

Physician to Victoria Hospital for Sick Children.

PHENOCOLL IN PREGNANT WOMEN.

M. Titone, of Palermo (*Rif. Med.*, November 24, 1894), in view of the well-known ecboic action of quinine, was led to try phenocoll in pregnant women suffering from malaria. The results were such as to satisfy him that while the drug is efficient as a remedy for malaria, it has no action on the uterus. He gave it in doses of $1\frac{1}{2}$ gramme, divided into four cachets, to be taken according to the Roman method, that is to say five, four, three, and two hours before a febrile paroxysm is due. The drug was given in this way till the attacks ceased, and in all the cases pregnancy went on to term without any of the uterine contractions, foetal movements, or slight hæmorrhages due to partial detachment of the placenta, such as are observed when quinine is administered to pregnant women. The author gives details of four illustrative cases, but he has used the drug in many more with equally beneficial results.—*British Medical Journal*.

DEATH FROM AND AFTER POST-PARTUM HÆMORRHAGE.

Tarnier (*Journal des Sages Femmes*, February 1, 1895) teaches that flooding after the application of the forceps must always be expected, since the instrument is usually employed because of uterine inertia, a source of hæmorrhage. The danger comes when the placenta is expelled. Tarnier, when called to apply the forceps for a colleague in private, used to leave before the delivery of the placenta. In consequence, he was very often called back. He makes these observations in respect to a robust woman who suffered from uterine inertia, and was delivered by forceps. There

was considerable flooding, but not so much as to lead to expectation of bad results. The patient went to sleep, but awoke a few hours later, and complained that she was suffocating. There had been no fresh hæmorrhage. She very soon died. At the post-mortem examination, miliary tubercle was found disseminated in abundance over the lungs, pleura, liver, and spleen. There was no evidence of insufficient blood in the system, no embolism, and no blood retained in the uterine cavity. The previous flooding, quite insufficient to harm a sound constitution, proved enough to kill this patient. Yet, externally, she looked healthy. We must be slow, says Tarnier, to find fault with a colleague for losing a patient after flooding. Had the above case occurred in private, and no necropsy held, the obstetrician would certainly have incurred more blame than he deserved. —*British Medical Journal*.

THE MANAGEMENT OF LABOR COMPLICATED BY HEART DISEASE.

It appears from a statistical study of labor in women with heart disease that the mortality is very high. There are some writers who place it at 50 per cent. But this is not my experience, nor is it the experience of some of my friends in active practice to whom I have spoken on the subject. It has been my fortune to see a number of these cases, and among them some of the severest type, several of them with a fatal issue within six months after confinement, but so far I have been lucky enough not to lose a parturient or puerperal patient from this complication. I recall one woman with valvular disease—both insufficiency and stenosis of the left auriculo-ventricular orifice—who sat bolt upright in bed, day and night, for weeks before delivery, with labored breathing and with a face as blue as indigo; another patient with congenital heart disease of both mitral and tricuspid valves, a primipara at the age of 44, with advanced kidney-disease to boot; a third with disease of the aortic orifice and an enormous aneurism of the arch of the aorta; a fourth with mitral disease of long standing, albuminuria, profound anæmia, and an exceedingly rapid, weak pulse; and a number of other cases not so striking, of which I have unfortunately preserved no exact record. Some of these women caused me the greatest anxiety, and I cannot help thinking that their recovery was due to a treatment sound in principle and carried out with sufficient energy and attention to details. The management of these cases which has proved successful in my hands so far, and to which I shall adhere as long as it yields good results, may be briefly outlined as follows:

In addition to the care every pregnant woman should receive in the matters of diet, regulation of the bowels, exposure to cold, and limitation of exercise, etc., the pregnant woman with heart disease should have iron

and strychnia; and one of the heart tonics, digitalis or strophanthus, should be administered in larger doses than would be given to the same patient were she not pregnant.

The urine should be examined more frequently and more critically than it usually is in pregnancy.

Pregnancy, as a rule, should be terminated prematurely. This not only secures an easier labor, but it avoids the strain upon the heart that increases with every day in the last month of gestation.

Finally, when labor begins, digitalis and strychnia should be administered in large doses hypodermatically until the os is the size of a dollar; then, in case of head-first labors, forceps should be applied and the child extracted as rapidly as possible, without regard to the integrity of the maternal tissues and without anæsthesia. In several cases I have deeply incised the cervix on all four sides to facilitate delivery.

This plan is of double advantage to the woman. It shortens the labor and saves her all the fatigue of voluntary muscular effort in the second stage, and it insures a hæmorrhage from lacerations along the birth canal when the child is born—the best safeguard against engorgement of the lungs and overstrain of the heart after childbirth.

Meanwhile, there should be placed in easy reach a hypodermatic syringe charged with nitroglycerin solution and some pearls of nitrate of amyl, the quickest-acting stimulants at our command; and when the placenta is expressed no ergot should be given, nor should other means be taken to prevent post-partum bleeding, which, within bounds, should rather be encouraged.

As soon as practicable, a large pad above the umbilicus and a tight binder should be applied to compensate for the sudden diminution of intra-abdominal pressure.—*Barton Cooke Hirst, M.D., in American Journal of Obstetrics.*

PÆDIATRICS AND ORTHOPÆDICS

IN CHARGE OF

W. B. THISTLE, M.D., L.R.C.P. Lond.,

Assistant Demonstrator of Anatomy, University of Toronto; Physician to Victoria Hospital for Sick Children; Clinical Lecturer on Diseases of Children in the Woman's Medical College.

AND

B. E. McKENZIE, B.A., M.D.,

Lecturer on Orthopædics and on Surgical Anatomy in the Woman's Medical College, and Surgeon to the Victoria Hospital for Sick Children, Toronto.

THE TREATMENT OF EMPYEMA IN CHILDREN, BASED ON AN ANALYSIS OF EIGHTY-SIX CASES.

In *Archives of Pediatrics* for March, 1895, Edmund Cantley, M.D., publishes an analysis of eighty-six cases of empyema in children, occurring in St. Bartholomew's Hospital during the last ten years. The average age was four and a half years. Total mortality, 14, or 16.6 per cent.

The cases are divided into four groups, according to the treatment adopted.

	TREATMENT.	NO. OF CASES.	RECOVERED.	DIED.	MORTALITY.
I.	Nil	4	3	1	25%
II.	Aspiration	12	12	0	0
III.	Incision	35	28	7	20%
IV.	Resection	33	27	6	18.2

Conclusions and remarks :

(1) An empyema may be reabsorbed, especially if the pneumococcus is the originating cause.

It is, however, bad treatment to leave the case to nature, on account of the risk of rupture internally through the lung, or externally through the chest wall.

Whenever pus is diagnosed in the pleural cavity it should be evacuated.

(2) The objects of treatment are (*a*) to remove the pus, (*b*) to prevent reaccumulation, (*c*) to procure complete re-expansion of the lung, (*d*) to leave behind no deformity.

(3) Aspiration is at best a temporary and unreliable mode of treatment. A thick fluid blocks the cannula. Even in the most formidable cases some fluid is sure to be left behind, and will act as a source of irritation. If carried out too rapidly there is danger of rupture of the lung, and consequent pyo-pneumothorax, or of œdema of both lungs. It is, however, useful in cases of urgency, in cases of sero-purulent effusions, and as a temporary expedient in double effusions. Cases recover completely under this mode of treatment, but the risks are out of proportion to the advantages gained. If used, siphon aspiration is better than the use of the bottle.

(4) Simple incision and drainage is better than resection of a rib, or part of a rib. It is very exceptional in children not to be able to drain efficiently through an intercostal space. Recovery does not appear to be more rapid under treatment by resection, and the shock is more severe. Certainly in the present series of cases the mortality from resection in children under three is enormous, as compared with the mortality among those treated by simple incision.

(5) When the medullar cavity of a rib is laid open there is greater danger of pyæmia.

(6) The risk of hæmorrhage is very small under either mode of treatment.

(7) It is unnecessary to explore the cavity and break down adhesions. In some cases it may be distinctly injurious.

(8) The chances of a radical cure are certainly no better under treatment by resection. In the present series four were sent out with a sinus, as compared with one of those treated by simple incision.

(9) There is greater liability to imperfect expansion of the lung and contraction of the side in cases treated by aspiration or resection, or left to nature, than if incision and drainage be adopted.

(10) Resection should be reserved for the rare cases in which the ribs are closely approximated, or as a secondary means to ensure closure of the sinus. It may be used as an accessory measure if drainage is found insufficient, subsequent to the simple operation.

(11) The tube should not be more than two inches long; it is not necessary to insert a long tube, as the mode of cure is not by granulation from the bottom, but by expansion of the lung, ascent of the diaphragm, and contraction of the side. It should be removed as soon as the discharge becomes scanty and serous, sometimes even as early as the third day; otherwise it acts as a source of irritation, keeping up the discharge, prolonging the illness, and militating against a successful cure.

HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

WILLIAM OLDRIGHT, M.A., M.D. Tor.,

Professor of Hygiene in the University of Toronto ; Surgeon to St. Michael's Hospital ;

AND

E. HERBERT ADAMS, M.D., D.D.S.,

COLONY FOR EPILEPTICS.

Pennsylvania is asking her legislature to appropriate \$300,000 for the establishment of a colony for epileptics.—*North American Medical Review.*

SMALLPOX.

From the 22nd of November last to the 5th of February, 1895, there were reported to the Supervising Surgeon-General of the Marine Hospital Service at Washington 1,256 cases of smallpox in the United States, and 350 deaths, nearly 28 per cent. The reports came from the following States : Connecticut, District of Columbia, Illinois, Indiana, Michigan, Missouri, New Jersey, New York, Ohio, Pennsylvania, Vermont, Virginia, and Wisconsin. This report does not mean that all the States not here named were free from smallpox.

HYGIENIC VALUE OF PERFUMES.

Dr. Andres, of Philadelphia, a few years ago made the interesting discovery that the ozone in the atmosphere, the element which is the great purifier, was mainly supplied from blooming flowers, and for this reason blooming plants were healthful in dwelling houses, as well as attractive. Some interesting experiments with the odors of flowers have been made in the old world, and it is found that many species of microbes are easily destroyed by various odors. The odor of cloves has been known to destroy these minute creatures in twenty-five minutes ; cinnamon will kill some species in twelve minutes ; thyme, in thirty-five. In forty-five minutes the common wild verbena is found effective, while the odor of some

geranium flowers has destroyed various forms of microbes in fifty minutes. The essence of cinnamon is said to destroy the typhoid fever microbe in twelve minutes, and is recorded as the most effective of all odors as an antiseptic. It is now believed that flowers which are found in Egyptian mummies were placed there more for their antiseptic properties than as mere ornaments or elements in sentimental work.—*Physician and Surgeon*.

VENEREAL DISEASES IN THE ENGLISH NAVY.

Judging by the report of the Director-General of the Medical Department of the English Navy for the past year, venereal disease is playing sad havoc in the service. There occurred during the year no less than 9,321 cases of syphilis and gonorrhœa; 3,106 of primary syphilis; 1,593 of secondary syphilis; and 4,622 of gonorrhœa and its sequelæ. The number invalidated for these diseases was 198, and there were five deaths. 4,923 of the cases came under observation at the home station. The ratio of primary syphilitic patients amounted to 51.66 per 1,000, as compared with 74.28 in the previous year. The time that the venereal patients were incapacitated from duty amounted in the aggregate to no less than 282,171 working days. Apart from its moral aspect, the subject is one demanding the most profound consideration. With the figures given before us, it is difficult to understand why less attention should be directed to the prevention of venereal diseases than is given to that of transmissible diseases.—*Medical News*.

DIMINISHING BIRTH RATES.

During recent years the birth rate per thousand population has been diminishing in proportion to population in most civilized countries, as will be seen by the following table:

COUNTRY.	1880.	1890.
United States.....	36.0	30.7
England and Wales.....	34.2	30.2
Scotland.....	33.6	30.3
Ireland.....	24.7	22.3
France.....	24.5	21.8
Belgium.....	31.1	28.7
German Empire.....	37.6	34.7
Austria.....	38.0	36.7
Switzerland.....	29.6	26.6
Denmark.....	31.8	30.6
Norway.....	30.7	30.0
Netherlands.....	35.5	32.9

—*Medical Record*.

THE MEDICAL CARE OF CHILDREN.

In his presidential address at the opening meeting of the Dublin University Biological Association, Mr. Henry C. Drury spoke of the importance of this subject, as manifested by the great infant mortality in large towns and cities. Taking for comparison the general mortality of the population at the high figure of 25 per 1,000, the mortality among infants in the first year of life reaches the fearful figure of 200 in every 1,000 born (Hench). No doubt much of this is quite inevitable, but no doubt, also, an enormous proportion is due to preventable causes. Two principal factors influence this great death-roll: one, the natural development of the child's body, tending to evoke pathological changes in the nervous system, glands, skeleton, etc.; the other, the condition of the child's surroundings—want of care, foul air, bad feeding, cold, hunger, inherited diseases, illegitimacy. The author believes, however, that much of this mortality is preventable by judicious medical treatment, and by the better education of mothers and daughters.—*Western Medical Reporter*.

THE WEATHER AND THE GRIP.

Humidity seems to be the important element in producing or aggravating the disease, for there is a corresponding increase of deaths with increasing humidity; but the fatality is most marked when the humidity is at its maximum and there is a sudden fall of temperature, which is clearly shown on April 21, when the death-rate was highest, with a record of over 250 in twenty-four hours. The death-rate is also high on the day following a sudden fall in temperature, as shown on April 1 and 30.

All through the epidemic the chart shows an increasing death-rate, with high or increasing humidity. The higher the humidity and the more sudden the fall of temperature, the greater the number of deaths. And it is also observed that when the temperature and humidity drop at the same time there is a sudden decrease in the death-rate; this will be seen on March 26, April 3, 4, 5, and 26.

It does not follow that excessively cold weather increases the death-rate unless there be a high humidity. On the other hand, it is clearly shown that with cold weather and low humidity the death-rate is greatly reduced.—*Weather Bureau of New York*.

BOVINE TUBERCULOSIS.

Considerable activity is being manifested by the public health authorities in some of the Eastern States in renewed attempts to exterminate tuberculosis in cattle. In New York, recently, thirty tuberculous cows

belonging to a choice herd were killed at Elmira, but criticism is made that the commissioners take such action only upon the request of owners—usually of costly cattle for the protection of the remainder—and that no systematic inspection is made of the common dairy herds, which furnish the milk supply, and which are generally kept under conditions that favor the development of the disease. In Massachusetts such a systematic inspection has been begun, with the avowed purpose of examining every cow, bull, and calf, beginning at Cape Cod and extending westward until the whole state has been covered; the tuberculin test is employed, and every animal that shows the characteristic reaction is to be slaughtered forthwith. On the recommendation of its sanitary committee the Philadelphia City Board of Health has also adopted the tuberculin test, and, after sixty days' notice, any milk producer supplying the city who fails to furnish a clean bill of health for his dairy—based upon the results of this test—will be liable to have his milk supply rejected as suspicious and its sale prohibited.—*The Journal of the American Medical Association.*

Editorials.

THE CLIMATE OF MUSKOKA AND TUBERCULOSIS.

AN article written by Dr. Graham appears in our present number giving an account of a visit to Saranac Lake Sanitarium, and advocating the claims of the Muskoka region as well fitted, both in situation and climate, for the cure of consumption.

We are already quite convinced that in the summer months as great a measure of success can be obtained in Muskoka in the cure of tuberculosis as in any climate of the world.

From the experience of the Saranac Lake Sanitarium in the winter time, we hope that in Muskoka results will be obtained in a properly managed sanitarium in the winter which will surpass those already observed in the summer.

THE PROPOSED CONSUMPTIVE SANITARIUM.

THE establishment of a Dominion sanitarium for the treatment of persons suffering from phthisis has been recommended by many people, professional and otherwise, during the past few months. Many western towns in the neighborhood of the Rocky Mountains have been mentioned as suitable places for such an institution, including Kamloops, Medicine Hat, Banff, Calgary, Fort McLeod, etc. Dr. Furrer, formerly of Toronto, who has lived in Kamloops for a number of years, strongly advises the selection of that town, as he considers that Kamloops has by far the best climate along the line of the C.P.R., and he quotes the opinion of many well-known authors to the same effect. Dr. Lambert, of the same town, supports Dr. Furrer in a very enthusiastic way, and contends that Kamloops has a climate which is more suitable for consumptives than Egypt, or any place on the Mediterranean, or any district of the American continent. It is, of course, not pretended that persons in the last stages of phthisis will derive any special benefit by residence in Kamloops but it is positively stated that many patients, undoubtedly suffering from incipient phthisis, have been practically cured after going to Kamloops, and many others in the later stages have had their lives much prolonged.

THE ONTARIO MEDICAL COUNCIL.

THE recent meeting of the Council was, for many reasons, a very important one. A certain number of members of the "Defence Association" had, for the first time, an opportunity of presenting their views on *the floor of the house*. During the last three years we have had a curious condition of things in medical politics in Ontario. There have been two distinct parties—the ins and the outs—the Council and the Defence Association. In the olden days of the Council's history there were various diversions and division of opinions, and occasionally stormy times. The attacks of the outs gradually consolidated the ins, until the Council recently became the most happy family that we have seen in modern times. In their hours of trial they hung on each other's necks in the most loving style, and their occasional "love feasts" were touching beyond description. At the same time, the Defence body were a decided unit in holding the opinion that every act of the Council was wrong. At present we scarcely know how to classify the various parties which exist; but the following will probably be nearly correct: Old Guard, Defence men, Independents.

It would be very difficult for an ordinary onlooker to get up within himself any extraordinary amount of enthusiasm over the proceedings of the June meeting; but we are not inclined to endorse all the adverse criticisms which it has called forth. The first day's work showed that there was no diminution of the bitter personal animosity existing between the Old Guard and the Defence men. The former, with a singular want of tact and good judgment, deliberately endeavored to squeeze the prominent Defence men out of positions on the main committees. It was so foolish and impolitic to keep such men as Drs. Sangster, McLaughlin, and Armour off the important committees, and the Independents showed such a decided disinclination to support the effort, that the Old Guard yielded—but in a most awkward sort of a style. The Independents, together with a few sensible and moderate men from each of the other parties, are evidently going to be the salt of the Council in the future.

Although we agree with those who deplore the methods employed in some of the debates, the unbusiness-like manner of carrying on the regular work of the session, the enormous waste of time involved in long and frequently very empty speeches, the fisticuff threats of certain muscular and fiery orators, and a few other trifling eccentricities which might well have been dispensed with, we think that, on the whole, much good work was accomplished. There is much new good blood. There is likely to be much less wirepulling in the future than there has been in the past. Many important questions were well threshed out. The radical reformers

who were going to revolutionize everything, and show how the Council could be run on nothing, failed to fully materialize ; but, at the same time, their efforts brought forth certain investigations which were sadly needed. We like much the disposition which was shown by so many to totally ignore partyism, and carefully study every subject which came up from a thoroughly independent standpoint.

OFFICERS OF THE COUNCIL.

ACCORDING to an unwritten rule of the Ontario Medical Council, a one-year term for the presidency and vice-presidency has become the recognized custom. Under exceptional circumstances this rule has not been observed, but any deviation from this custom is rare. It is exceedingly important that the president should, at least, know the ordinary rules of parliamentary procedure, and be prompt and firm in giving and adhering to his rulings on points of order. Too much time was wasted in discussions on these matters at the recent meeting. The president was sadly handicapped by the antagonism which existed between certain parties, which seemed to make certain of the members very captious in their manners, and hard to manage. On the whole, the presidents of the Council in the past have done their work conscientiously and well, barring certain errors of judgment which have sometimes been manifested.

The salaried officers of the Council, who, as a matter of fact, are supposed to retain their positions during good behavior, or until they resign, are, perhaps, of still more importance. Probably, all things considered, the most important officer in the Council is the registrar. During the last three or four years, there has been an occasional whisper in the air to the effect that Dr. Pyne would either be removed or have his salary reduced in the near future. Judging from the proceedings of the recent meeting, Dr. Pyne commands the respect and confidence of the vast majority of the members of the Council. We have no hesitation in saying that we believe he is thoroughly entitled to such respect and confidence ; and, we may add, we think it would be exceedingly difficult, if not impossible, to put another man in his position who would equally well fulfil all the requirements at the present juncture. As to the other question referred to, we have only to say—if you have a good officer, you had better give him a decent salary.

The recent prolonged illness of Dr. W. T. Aikins, the treasurer, has caused deep sadness among his numerous friends in all parts of Canada. Recent reports, however, indicate a great improvement, with good pros-

pects of complete restoration to health in the near future. We are exceedingly rejoiced at the kind treatment that was accorded to him at the recent meeting, and, in connection therewith, have much pleasure in quoting portions of the words of Dr. McLaughlin, who seconded the motion for his reappointment, which was moved by Dr. Britton: "I know Dr. Aikins better personally, perhaps, than any man in this room; I lived with him, have been his student, and an intimate friend and companion for the last thirty-five years, and I know Dr. Aikins to be a man utterly beyond reproach and beyond suspicion; and a more conscientious officer this Council never had and never will have. I thoroughly concur in the motion that has been made; I am anxious to see Dr. Aikins treasurer again; he has been treasurer since the inception of this Council, and I hope he will remain treasurer as long as he is able to discharge the duties of the office."

THE BRITISH MEDICAL ASSOCIATION.

IT is expected that the coming meeting of the British Medical Association will be the largest that the society has known. It will be held in London, Tuesday, Wednesday, Thursday, and Friday, July 30, 31, and August 1st and 2nd. The address in medicine will be delivered by Sir William Broadbent; the address in surgery, by Mr. Jonathan Hutchinson; the address in physiology, by Dr. Edward Albert Schafer. The scientific business of the meeting will be conducted in fifteen sections.

In addition to the various papers to be presented, the following subjects have been selected for discussion: Diphtheria and its treatment by the antitoxin; acute lobar or croupous pneumonia; acute rheumatism; diagnosis and treatment of fractures of the upper third of the femur; surgical treatment of cysts, etc., of the thyroid gland and accessory thyroids; anti-septic precautions in private midwifery practice; early diagnosis of malignant disease of the uterus, and the treatment by partial or total excision; regulation of the slaughter of animals for human food; hospital isolation, house quarantine and disinfection; treatment of melancholia; insanity in relation to criminal responsibility; epilepsy, and its relation to insanity; mechanics of the cardiac cycle; art in its relation to anatomy; development and structure of the placenta; topographical anatomy of the abdomen; neuritis; vaccinia and variola; pernicious anæmia; lymphadenoma; rare cases of recurrent ophthalmia; diagnosis of orbital growths; revision of the Pharmacopœia; etiology of mucous polypi of the nose; infectious nature of lacunar tonsillitis; early radical operation in malignant disease of the larynx; pruritus; diet in diseases of the skin; intra-professional etiquette; advertising; unqualified assistants etc., etc.

Correspondence.

To the Editor of THE CANADIAN PRACTITIONER :

DEAR SIR,—After some years' absence from your city, it is somewhat gratifying to note that Toronto has not been unmindful of opportunities, and has kept in the front rank of all that pertains to thorough medical education. While lacking the almost inexhaustible material of some of the denser centres of population, the amount of clinical material at the disposal of the various teaching faculties is more than a little surprising to those whose knowledge of Toronto dates back some ten or twelve years. In a professional sense we may speak of the new Toronto, as compared with the restricted advantages, scarcity of material, and necessarily limited practical teaching which characterized that period—limitations which compelled many to supplement their course by practical work elsewhere. But with the advantages of to-day no student (except he contemplate special work) need seek outside of Toronto that information required to thoroughly fit him for professional life. But while we view these achievements with patriotic pride, is there not an additional step to be taken by placing these facilities before those who have hitherto been deprived of them? I refer to the establishing by the faculties of the four principal city hospitals of a short post-graduate course. This suggestion is the result of conversations which I have had with medical men in different parts of the province during my recent visit to Ontario. There exists a class of practitioners who, while they regret the deficiencies of their early training, are alive to the appreciation of modern advancement, but are so environed by domestic or financial conditions that even a six weeks' course in New York is beyond the limit of the possible. To this class a short practical course in Toronto, where education, business, and recreation might hold high carnival, would recommend itself. These men do not desire to become experts in lens extraction or hysterectomy, but to witness such work as comes under the rôle of the general practitioner, and to enable them, when face to face with the gravest lesions—which are necessarily first seen by the general practitioner—to at least give the patient an aseptic wound (if any), and a reasonable expectation of life, even though manipulative skill and appliances be deficient.

So far as could be gathered from those practitioners with whom this subject was discussed, the desire is for a course eminently practical, without spread-eagleism or oratorical display, and not to exceed two weeks in duration. The subjects to receive special attention—modern surgery, with stress laid upon asepticism; methods of diagnosis, including bacteriological examination of sputum and exudations; the use of laryngoscope and ophthalmoscope. The evenings might be spent in social medical conference, or in discussing matters pertaining to public health, not forgetting the social diversions which the various public bodies of our capital might see fit to offer.

The case is stated; I leave to those more qualified the consideration in detail.

ERNEST M. HALL.

Vancouver, B.C., June 4, 1895.

To the Editor of THE CANADIAN PRACTITIONER:

DEAR SIR,—A copy of the accompanying circular has been sent to every manufacturer of electro-therapeutic apparatus whose address is known.

The American Electro-Therapeutic Association will meet in Toronto on September 3rd, 1895, and its Standing Committee on Electrodes is endeavoring to secure before that date the universal adoption of uniform connections, a standard gauge of screw throughout construction, and efficient, durable, simple, and interchangeable electrodes.

In matters of such importance to the ever-increasing number of practitioners who employ electricity, your hearty co-operation is earnestly requested.

CHARLES R. DICKSON, Chairman.

DEAR SIR,—The above committee of our association has been directed to write you, along with the other manufacturers of electrical apparatus, to engage your co-operation in securing the general adoption of:

I. Uniform connections and interchangeable electrodes:

- (1) Universal rheophore tip.
- (2) Universal aperture for same.
- (3) Universal attachment for electrolysis needles, etc.

II. Standard gauge of screw throughout construction, should screws be required.

N.B.—The adoption of a "society screw" for microscopes has been of mutual advantage to the makers of these instruments and their customers. It has led to increased sale, while it has also facilitated repair. The same advantages would follow the adoption of the above recommendation.

The committee was also instructed to request manufacturers to submit to it the various forms of electrodes now on the market, to test the same, and to report at the meeting of the society to be held in Toronto during September, 1895. Will you also kindly send the usual circulars, describing the special advantages of your instruments, which may be forwarded to the following members of the committee:

Gynæcological Electrodes, Dr. Lucy Hall Brown, 158 Montague street, Brooklyn, N.Y.

Neurological Electrodes, Dr. C. Eugene Riggs, The Endicott Arcade Building, St. Paul, Minn.

Surgical Electrodes and others not specified, with samples of rheophore tips, sockets, and other connections, Dr. Charles R. Dickson, 159 Bloor Street East, Toronto, Canada.

Trusting to hear from you at your earliest convenience,

I am, yours truly,

CHARLES R. DICKSON, Chairman.

The Ontario Medical Council.

TWENTY-NINTH ANNUAL SESSION.

THE twenty-ninth session of the Council of the College of Physicians and Surgeons of Ontario was opened Tuesday, June 11, at 2 p.m., in the Medical Council building. This was the first meeting of the council elected in 1894.

Dr. R. A. Pyne, registrar, called the meeting to order. These members were present: Doctors Armour, Barrick, Bray, Britton, Brock, Campbell, Dickson, Emory, Fowler, Geikie, Graham, Hanly, Harris, Henderson, Henry, Logan, Luton, Machell, Moore, Moorehouse, McLaughlin, Reddick, Rogers, Roome, Rosebrugh, Sangster, Shaw, Thorburn, Thornton, and Williams.

The first business was the election of officers. Dr. W. T. Harris, Brantford, was elected president, Dr. A. F. Rogers, Ottawa, vice-president, both without opposition. The next office to be filled was that of registrar. Dr. Bray proposed the name of Dr. R. A. Pyne. Dr. Armour moved in amendment that the matter be allowed to stand. He said that there would be a strong attempt made, and, he trusted, a successful one, to have salaries reduced. It would not be fair to appoint Dr. Pyne at this stage, and, after he had accepted the position, reduce his salary. The president ruled the amendment out of order on the ground that the constitution provided that the officers should be elected at this stage. A warm discussion followed, after which the amendment was withdrawn. The main motion was then put. All the members but two voted for Dr. Pyne's reappointment. Dr. W. T. Aikins was elected treasurer. Mr. B. B. Osler, Q.C., was elected solicitor. Two names were proposed for the position of stenographer—Mr. Alex. Downey and Dr. J. N. E. Brown. Mr. Downey was elected on a vote of 22 to 8.

Dr. Armour moved that Doctors Williams, Reddick, Roome, Barrick, Britton, Fowler, Logan, Sangster, and the mover constitute a committee to strike the standing committees.

Dr. Bray moved in amendment that these names be substituted: Doctors Logan, Moore, Dickson, Geikie, Roome, Henry, Moorehouse, Brock

Fowler, Thorburn, Williams, and the mover. The amendment was carried, 21 to 8.

After a delay of an hour, the committee reported that they had struck the standing committees as follows :

Registration Committee—Drs. Barrick, Campbell, Dickson, Rosebrugh, and Shaw.

Rules and Regulations Committee—Drs. Emory, Hanly, Luton, Roome, and Sangster.

Finance—Drs. Bray, Brock, Henderson, Machell, and Thorburn.

Printing—Drs. Emory, Henry, Luton, Moore, and Reddick.

Education—Drs. Bray, Britton, Fowler, Graham, Geikie, Logan, Moore, Moorehouse, and Williams.

Property—Drs. Barrick, Henderson, Machell, Thorburn, and Thornton.

Complaints—Drs. Armour, Henry, McLaughlin, Moorehouse, and Sangster.

Dr. Sangster opposed the adoption of the report. He said that if such a report was carried it would simply mean a declaration of war against those gentlemen who had been elected as Defence members. Not one of them had been appointed to an important committee. If the council intended to rush such a report through they might do so, but the profession would know how to resent such an act. After considerable discussion the motion was withdrawn, and the council went into committee of the whole to consider each committee separately. Dr. Sangster drew the attention of the council to the fact that the constitution provided that there should be seven members on the Committee of Registration. The striking committee had nominated but five members. He wanted to know why the full complement had not been appointed on this committee. No one appeared able to answer the question. The names of Dr. Hanly and Roome were then added to the committee.

Dr. Sangster moved that Dr. Armour's name be substituted for that of Dr. Thorburn's on the Finance Committee. Dr. McLaughlin said that it was most important that Dr. Armour should have a place on this committee. He had been making a study of the finances of the council, and had certain reforms he wished to press. Dr. Machell offered to withdraw in Dr. Armour's favor, and leave Dr. Thorburn on the committee. Dr. Machell's suggestion was adopted.

Dr. McLaughlin moved that the name of Dr. Sangster be placed on the Education Committee.

Dr. Rogers said that he had never known a new member to be appointed to this committee.

Dr. Williams offered to withdraw in favor of Dr. Sangster.

Dr. Bray said that he had been on the committee since he had been a member of the council. It had been said that he was opposed to certain members of the council and their policy. He wished them to understand that he held views of his own which were probably as strong as those opposed to him, but in order that the council should be united he wished to hold out the olive branch, and though he had been on the Education Committee for fifteen years, and had always felt a great interest in the working of this committee, he would move that his name be struck out and that of Dr. Sangster substituted. The motion carried, after which Dr. Bray, amid applause, walked down the aisle and shook hands with Dr. Sangster.

The Committee on Rules and Regulations was changed. It stands—
Drs. Emory, Armour, Roome, and Reddick.

Dr. Bray was placed on the Committee of Complaints in place of Dr. Sangster. The other committees were allowed to stand. The report, as amended in committee of the whole, was then adopted by the council.

NOTICES OF MOTION.

Dr. Williams gave notice of motion that at the Thursday morning session the council should resolve itself into committee of the whole to consider the subject of medical tariff.

Dr. Armour gave notice of motion that he will at the next meeting of the council move that a committee be appointed to investigate the financial resources and expenditure of the council, and to report the results, recommending such means as may be deemed desirable to bring the expenditure within the revenue.

Dr. Thornton gave notice of motion that he will move to-day that this building, being altogether beyond the requirements of the council, and the limitations prescribed by the Ontario Medical Act, and being also annually and increasingly a source of great financial loss to the college, it be at once offered for sale by competitive tender, and that in the event of a sale being effected an effort be made to lease from the purchaser for a lengthened period the rooms occupied at present by the council at a reasonable income.

Dr. Sangster gave notice of motion that the matriculation requirements of this council now in force shall cease to be on and after the 1st of October, 1896, subsequently to which every person desirous of being received by this council as a matriculant shall present to the registrar an official certificate of having passed the departmental senior leaving examination.

Dr. Bray gave notice that he will move that the first order of business at the afternoon session of this council on Thursday be the consideration of the report of the Discipline Committee *re* one E. A. A. B. Rose.

Dr. Sangster gave notice of motion to amend by-law No. 22, referring to the duties of the registrar in keeping the register correctly.

WEDNESDAY, JUNE 12.

The registrar read the annual report of the treasurer, which stated that the receipts for the year ending June 11 had been \$45,201, and the expenditures for the same period, \$44,186. The report was referred to the Finance Committee.

AN INVESTIGATION.

Dr. Armour moved that a committee be appointed to investigate the financial resources and expenditures of the council, and to report the results, recommending such means as may be deemed desirable to bring the expenditure within the revenue. In moving the resolution, he said that the receipts of the council were chiefly obtained from registration, examination fees, and fines. During the past three years the revenue collected from these sources had amounted to \$40,981, or about \$13,660 per year. There was reason to believe that this revenue would continue. He thought it would be advisable to reduce the annual expenditure so as to bring it well within this amount. The chief items of expenditure in the past had been fees to examiners, salaries to officers, printing charges, and real estate charges. There was room for lessening each of these charges, but if the printing and real estate expenditures were brought within reasonable bounds, such as the necessities of the service required, the need for reducing the other items might be obviated. The receipts from the sources mentioned had averaged \$13,660. The average expenditure for the same period, omitting the charges on the building and real estate, had only been \$10,960, leaving an annual surplus, a moiety of which should supply the necessary building accommodation. Notwithstanding this, the total expenditure had greatly exceeded the total receipts. He wished the matter thoroughly threshed out.

Dr. Britton moved, in amendment, that the matter be referred to the Finance Committee.

Dr. Roome raised a point of order. He held that the original motion would have to be voted upon, and, if carried, then the matter might go on to the Finance Committee, but not otherwise.

President Harris ruled the amendment in order. The amendment carried.

MATRICULATION.

Dr. Sangster moved this resolution: "That the matriculation requirements of this council now in force shall cease to be on and after the 1st of October, 1896, subsequently to which every person desirous of being received by this council as a matriculant shall present to the registrar an

official certificate of having passed the departmental senior leaving examination." He said that the profession was overcrowded in Ontario, and that unless drastic measures were taken immediately the profession would be brought into disrepute, and would soon be ruined. The great majority of members of the profession in Ontario were not more than making a bare living at the present time, while year after year hundreds of young men were being turned loose as full-fledged medical men. Something had to be done. If the present standard for qualifying was not raised within five years, the membership of the profession would be doubled. The public mind was ripe for a raising of the standard. The Local Legislature would second rather than oppose the scheme. He would like to see a degree in arts made necessary, although his resolution had not gone that far. He did not want the resolution sent on to a committee and then buried, as he understood certain resolutions had been dealt with in the past. Concluding, he said: "If this resolution is to be knifed, let it be done in open council and in broad daylight."

Dr. Campbell moved that the resolution should be referred to the Committee on Education. Carried.

RECIPROCITY IN MEDICINE.

Dr. Logan moved that in view of the general interest taken in the subject of Dominion medical registration by the medical profession of our country, this council recognizes the desirability of establishing Dominion medical registration so soon as the various provinces can comply with the conditions of the Ontario Medical Act.

Dr. Rogers seconded the motion. He said that it was a matter of regret that the medical men of Quebec had failed to have their law changed. Under their law graduates in medicine from certain medical colleges in Quebec were permitted to practise without any further examination. Under this state of affairs it would be impossible to have reciprocity.

Dr. Williams could see no reciprocity in the scheme proposed. Under the plan mentioned it was a case of Ontario dictating all terms. He thought that to constitute any reciprocity it would be necessary for medical men from all provinces to meet together and come to terms. It was absurd for Ontario to set up her standard and then pose as being very liberal when she asked the other provinces to come in and accept her terms.

Dr. Reddick would like to see Dominion registration, but he did not think the proposed resolution would bring it about. The Ontario Council must be prepared to give and take.

Dr. Rogers said that in 1893 representatives from all provinces had met at Ottawa and agreed that the standard for Dominion registration should be the Ontario Act. The representatives from Ontario had not held up a

club and made the demand. The decision was arrived at by agreement between all the representatives.

Dr. Bray said that at the meeting referred to the representatives from Manitoba and British Columbia had opposed reciprocity. They held that doctors were a drug on the market in Ontario, and that if there was reciprocity medical men from Ontario would overrun their territory.

Dr. Fowler said that the universities of Quebec would never consent to give up their present privileges. They now had the power to grant degrees in medicine, and would not give them up without a struggle. The colleges in Ontario were very sorry that they had given up their privileges in this respect. He thought that the only way to secure reciprocity would be by coming to some agreement with the universities.

Dr. Logan asked if the members were prepared to make any concessions to the other provinces. (Cries of "No, no.") Continuing, he said that they should in that case be prepared to defend their law and advocate it.

The motion was finally referred to the Registration Committee.

THE MEDICAL BUILDING.

Dr. Thornton moved that this building, being altogether beyond the requirements of the council and the limitations prescribed by the Ontario Medical Act, and being also annually and increasingly a source of great financial loss to the college, be at once offered for sale by competitive tender, and that in the event of a sale being effected an effort be made to lease from the purchaser for a lengthened period the rooms occupied at present by the council at a reasonable income. He said that in some of the constituencies this subject had received more consideration than in others. There was no denying the fact that there was a great deal of dissatisfaction throughout the country with matters as they stood. When the building was erected, all murmurs were stifled with the statement that it would prove a source of revenue, and that the profession would have a respectable home. In his address last year the president said that no member of the council had been defeated because he had voted for the construction of the building. The reason was that it was expected a revenue would be derived. No one would now deny that the building had been a source of very serious loss. There was a deficit of over \$20,000. He wished the members to look the matter calmly in the face. For the last year, after allowing \$2,000 for the use of the building by the council, there was yet a deficit of over \$5,000, and this deficit was constantly increasing. What did the council intend doing? In going into a property speculation the council had gone quite outside its duty. The members had no business to pose as real estate experts; that was not

their business. His constituents had demanded that he should bring the matter before the council. If the profession should be called upon at any future time to make good the deficit, he could promise that they would refuse to do it.

Dr. Thorburn thought the motion out of order. The matter should be left to the Finance Committee.

Dr. Williams said that there might be more than one opinion as to the wisdom that governed when it was decided to erect the building. One thing was certain. The men who composed the council at the time acted as they thought best. Dr. Armour had moved for a full investigation as to the financial standing of the council, and until that committee reported he thought it would not be well to discuss such a subject as the selling of the building. He moved that the matter should be referred to the Finance Committee for a report.

Dr. Geikie said there was a bright side to the question. Hard times were over; business was brightening up, and the building would prove a good investment yet.

Dr. McLaughlin said that the building had been erected for speculative purposes, in direct violation of the Ontario Medical Act. He quoted from the Act to show that the council were prohibited from purchasing property. Calamity after calamity had befallen the council since the building had gone up. In 1889 there was a deficit of \$3,076; in 1890 it was \$2,428; in 1891, \$2,726; in 1892, \$3,412; in 1893, \$2,872; in 1894, \$3,531; and last year, worst of all, \$4,203. He said the matter should be dealt with in a business-like manner, and the building sold.

Dr. Geikie said that if the membership fees had been paid the deficits would have been greatly decreased.

The matter was then referred to the Finance Committee.

THE EXPENSES.

Dr. Sangster moved that by-law No. 22 be amended so as to provide that the expenses to be paid members of the council shall not exceed one first-class railroad ticket and \$10 a day. He said that the members could not proceed to economize with good grace unless they proceeded to cut down their own emoluments. In addition to drawing their \$10 per day and their railway expenses, members were at present drawing \$3.50 per day for hotel expenses. He would like to see all indemnity dropped for a few years until the finances of the council were in a better condition. Members were in the habit of charging for full-fare tickets both ways, instead of charging only for a return ticket. He thought all members should be above such small matters.

President Harris ruled the motion out of order, and refused permission for further discussion.

NOTICES OF MOTION.

These notices of motion were given :

Dr. Henry : That the Discipline Committee be requested to use their best efforts to have the law simplified by which offenders against the Medical Act can be dealt with, with a view to economy.

Dr. Henry : That the registration fee for matriculation in future be fixed at \$50, instead of \$20, as at present.

Dr. Henry : That in future all students be required to make a declaration before receiving their licenses to practice that they will not engage in lodge or contract work of any kind.

Dr. Brock : That the registrar report the names of all members in arrears, and the amount up to and including the year 1892.

Dr. Sangster : That he would introduce a by-law to amend by-law 22. The council then adjourned.

THURSDAY, JUNE 13.

Dr. Sangster introduced a by-law providing that members of the council shall not draw more than \$10 per day, and the cost of one first-class ticket to the place of residence.

Dr. Williams pointed out that if the by-law passed no provision would be made for members who had to travel by night in Pullman cars.

Dr. Roome said that the fairest method of dealing with the question would be to allow mileage.

Dr. Geikie suggested that it be added that members who lived at a distance should be allowed to take some refreshment on the way, and that they be not allowed to charge more than ten cents for the same. (Laughter.)

Dr. McLaughlin said that Dr. Geikie was the last man who should talk of ten-cent lunches, since he had been in the habit in the past of taking his porridge at home, and charging \$3.50 a day for it. (Laughter.)

Dr. Sangster opposed the mileage system. There were medical men who were members of parliament, and who travelled on passes. This he thought degrading. The mileage system would double the cost of expenses.

Dr. Roome said that he was a member of parliament, and that he had passes upon some roads. Whether or not he travelled to the meetings of the Medical Council on these passes was nobody's business. He did not think that the medical profession of Canada would like to see their representatives travel as emigrants. (Hear, hear.)

Dr. Sangster said that the reason he had moved in the matter was that certain members in the past had drawn full allowance for more time than they had put in.

Dr. Rogers denied this statement, and called upon Dr. Sangster for proof.

Dr. Sangster read from the registrar's returns, alleging that Dr. Rogers had drawn full expenses upon several occasions for more days than he had served.

Dr. Williams thought that dirty linen should be washed outside the council chamber.

Dr. Armour thought the discussion perfectly in order. Dr. Rogers had challenged Dr. Sangster, and had received his answer.

At this point Dr. Rogers sprang to his feet, and said that he would settle the matter outside with Dr. Armour if he insisted in proceeding with the matter further. At this point the chairman stepped in and insisted that the discussion should stop. The matter was referred to a special committee.

MEDICAL CHARGES.

Dr. Williams moved that medical tariffs should be established upon a legal basis. He said that the section of the Act relating to tariff had been abrogated at the last session of parliament, and that at present medical men had no legal tariff. This had been brought about by the Patrons. The objection that had been raised by the Patrons was that medical men fixed their own fees. This had been abolished, and it was now for the council to prepare a scheme which would give them a legal tariff. The point was that such tariff would have to be submitted to some unprejudiced outside body, such as the County Court, the Governor in Council, or other body. He was of the opinion that the Medical Council would be the proper body to fix the tariff, but, owing to the cry which had been raised against the profession by the Patron body in the country, he did not think this practicable at present. He thought it might be advisable for a year or two to do without a tariff, and allow each member of the profession to fix his own charges in the meantime. He said that after public opinion had quieted down he thought there would be no difficulty in having the Local Legislature pass a proper tariff. He had good reason to believe this. The matter was allowed to stand.

DR. ROSE DISQUALIFIED.

The case against Dr. E. A. A. B. Rose, Portland, Leeds county, Ontario, was next taken up. The charges against Dr. Rose were: (1) That he had procured his registration as a member of the College of Physicians and Surgeons of Ontario in 1872 by false and fraudulent representations.

(2) That he had been guilty of infamous and disgraceful conduct by causing to be printed in August, 1892, certain pamphlets setting forth the details of certain diseases, particularly cancer, and representing that he could cure them, knowing this to be false.

(3) That he had entered into an agreement with a certain patent medicine company to advertise their business and pills for money.

(4) That he allowed his name to be used by the company in advertisements printed in a number of newspapers in 1892, recommending the above-named patent medicine.

Dr. Rose was tried before the Discipline Committee last Monday. The committee found that charge No. 1 had not been sustained by the evidence. Charge No. 2 was found to have been proven. Charge No. 3 was found not proved. Charge No. 4 was found to have been proven. The committee also found that Dr. Rose had stated to one Thomas K. Scovill that he was a graduate of McGill College, which statement had been proven false.

A letter was read from Dr. Rose promising that if matters were allowed to stand as they were, without the council taking further action, he would guarantee to do nothing in violation of the rules of the council in future.

Mr. Leighton McCarthy, who appeared at the trial as counsel for the prosecution, and Mr. Lavell, counsel for Dr. Rose, appeared before the council and argued the case.

Mr. Lavell said he admitted that charge 2 had been proven. The pamphlet had been printed, and when it was printed Dr. Rose believed that every word contained therein was true. He had since destroyed the pamphlet, and since objection had been taken to his course he had complied in every way with the rules. The charges were three years old. Since that date the doctor had been acting in the most professional manner. He trusted that so severe a penalty as striking his client's name from the rolls would not be resorted to.

Mr. Leighton McCarthy pointed out that Dr. Rose had written a letter to the patent medicine company, stating that he had been cured of disease, and recommending the pills. He had afterwards received \$25 from the company.

After argument, Dr. Moorehouse moved that the pledges made by counsel for Dr. Rose be accepted, and that action should be suspended for the present. He said that there were many medical men in good standing that he knew who had practised quackery to as great an extent.

Dr. Rogers pointed out that Dr. Rose was in good standing, and that the charge which had been called into question, his right to registration, had not been proved. If the name of Dr. Rose was struck off, he doubted if the courts would sustain the decision of the council. He advised that the matter should be allowed to stand, and Dr. Rose, who was in a dying condition, be allowed to go upon suspended sentence until such time as he should offend again.

Dr. Britton moved in amendment that Dr. Rose be struck off the rolls. After considerable discussion, the main motion was withdrawn, and the

council, by unanimous vote, decided to strike Dr. E. A. A. B. Rose off the rolls.

LODGE PRACTICE.

Dr. Pyne read this letter from the secretary of the West Toronto Medical Association :

"At the regular meeting of the association, held April 10, 1895, this resolution was unanimously carried :

"That the West Toronto Medical Association request the Ontario Medical Council to send a question to every registered man in the province, asking him to state whether he is in favor of doing away with all lodge and contract practice. Answers to be returned, giving reasons, yes or no. The question to be asked through their organ, the *Ontario Medical Journal*; and that the president and secretary of this association take steps to have this request carried out."

The communication was referred to the Committee on Education.

THE DISCIPLINE COMMITTEE.

Dr. Rogers nominated Doctors Bray, Logan, and Moore to form the Discipline Committee for the current year.

Dr. Sangster objected to the name of Dr. Moore. He said that no university representative should be allowed to sit on this committee. It would not be long before graduates of the universities, in the usual current of events, would be before the committee and their professional lives at stake. He did not think it proper that a representative of the universities should, therefore, sit in judgment upon such cases. The names as proposed were allowed to stand.

WHO ARE IN ARREARS?

Dr. Brock moved that the registrar be required to furnish a statement showing the names and amount that medical men are in arrears for dues and fees. The motion passed.

CASES PROSECUTED.

Detective Wasson sent in his annual report, which stated that he had prosecuted, for breaches of the Medical Act, during the year in fifty-nine cases, and had secured convictions in twenty-nine cases. The fines had amounted to \$1,215, and the expenses \$1,004.

NOTICES OF MOTION.

The following notices of motion were given :

Dr. Fowler: "That passing the departmental matriculation in arts, attending subsequently a session in arts, and passing the required exami-

nations at the end of the first session in arts in any recognized university, shall entitle such student to be registered by the Medical Council on paying the required fees."

Dr. Rogers: "That a by-law be adopted levying an annual assessment and for the collection of all arrears of assessments."

Dr. Brock: "That this council take into consideration the question of the examination of all nurses who are now, or may be hereafter, students at the various training schools for nurses in connection with the hospitals of this province."

Friday, June 14th.

EXAMINATIONS FOR NURSES.

Dr. Brock moved that this council take into consideration the question of the examination of all nurses who are now, or may be hereafter, students at the various training schools for nurses in connection with the hospitals of this province.

After a brief discussion the motion was withdrawn.

Dr. Rosebrugh read the report of the Registration Committee, which stated that the council had no power to grant D. A. McKillop permission to practise until September, 1896; that the request of W. D. McNab to be allowed to practise until September could not be granted; that Gustav Trompetter be instructed that he must comply with clause eleven of the medical curriculum before he can register as a member of the council; that the resolution of Dr. Logan referring to medical reciprocity between the several provinces be adopted as soon as provincial legislation which would be mutually acceptable can be secured, and that the Executive Committee of the council be empowered to consult with all authorized representatives of the profession in the other provinces with this end in view. The report was adopted.

Report will be concluded next month.

Meetings of Medical Societies.

THE fifteenth annual meeting of the Ontario Medical Association was held in the Medical Council building, Toronto, June 5 and 6.

The President, Dr. R. W. Bruce Smith, of Hamilton, occupied the chair.

This year's meeting was one of the best in the history of the association. The attendance of 230 members stamps this as one of the most progressive of the state or provincial associations.

DELAYED UNION IN FRACTURES

was the title of the first paper, read by Dr. Geo. A. Peters, of Toronto, which appears on page 487.

Dr. McKinnon said these cases were not so numerous since plaster of Paris dressings had come into general use. On account of the shrinkage of the splint and of the limb a readjustment should be made, the splint being slit down so that it could be tightened, if necessary.

He then gave the history of a case of delayed union where plaster of Paris had been used, but, through lack of care, union had not taken place. A stiff cardboard splint was applied, and perfect union occurred five months after the injury.

Dr. Shepherd, of Montreal, agreed that anæsthetics should be used if perfect reduction could not be made without them. As a preventive measure, immobilization should be ensured. In cases of delayed union he was in perfect accord with the treatment advocated by Dr. Peters.

Dr. T. K. Holmes thought it wise to remove the dressings from a fractured limb occasionally, to see that circulation to the fractured part was perfect; if circulation were free, delayed union was not so likely to occur.

Dr. Grasett said the surgeon was more or less at fault in many cases where delayed union occurred. Often care enough was not taken to secure a perfect coaptation.

Dr. Cameron disagreed with the statement that delayed unions occurred as the fault of the surgeon. He said also that imperfect immobilization was not incompatible with perfect union. Neither the ribs nor the clavicle could be perfectly immobilized, yet union would take place.

Dr. Gibson reported an old suppurative case in which the ends of the bones were sawed, perfect union resulting.

Dr. Marr reported the history of a case which had passed through the hands of several surgeons, where re-immobilization was tried with success.

Dr. Powell recommended that the surgeon should make a photograph of the actual appearance of the limb, and that the surgeon should own the fixation apparatus.

Dr. F. J. Shepherd, of Montreal, read an interesting paper on

THE SURGICAL TREATMENT OF CERTAIN FORMS OF BRONCHOCELE.

He said that since the perfection of antiseptic methods removal of cystic bronchoceles was comparatively easy. His experience was small, having operated upon only fifteen. He had had no deaths. In several cases the tumor reached from the hyoid bone to the clavicle. They were more favorable when one side was affected. These enlargements were, as a rule, cystic and encapsulated, containing a dark yellow fluid, containing cholesterolin, round cells with fatty globules. Dark coffee-ground material was also to be seen, due to hæmorrhage. The solid tumors were colloid in character. Various methods of treatment had been adopted— injection, scraping out, draining and packing. But enucleation was the best method. Some of them were removed with considerable difficulty, due to subsidiary cysts on the posterior wall, or hæmorrhage, or the friability of the cyst wall. In one case he had cut the internal jugular. The deeper vessels were often troublesome. The method he employed was to make his incision directly over the tumor, empty cyst of contents, and then shell out. He preferred chloroform to ether as an anæsthetic in these operations.

The reader then gave the history of several of his most interesting cases.

The afternoon session was opened by the President, Dr. R. W. Bruce Smith, delivering the annual address, which appears on page 479.

THE PRIMARY REPAIR OF GENITAL LESIONS OF CHILDBIRTH.

Dr. K. N. Fenwick read a paper with this title. It dealt more particularly with perineal and cervical tears. These tears would sometimes occur in spite of the most careful attention. Examination should always be made by sight, as well as touch, to ascertain the condition of the genital tract after labor. If left alone, these lesions would never repair so well as if properly stitched under thorough asepsis; and the results of unrepaired tears were often serious. By immediately being attended to, the danger of septic infection was infinitely lessened, and the work of the gynæcologist curtailed. Authorities quoted by the essayist recommended non-interference with cervical tears, but his opinion was, in view of subse-

quent dangers, to immediately adjust the edges by sutures. Dr. Fenwick recited his method of repairing these tears. He says: "To operate on a recent tear, it will be found easier to place the patient on her left side, irrigate with bichloride solution (1-8,000), pass a tampon into the vagina so as to prevent blood flowing from the uterus over the wound; then, with a curved needle held in a needle-holder, pass a silkworm-gut suture deep through the tear. Beginning at the vaginal part, we pass as many sutures as are necessary until we reach the anal part of the wound. We must be careful to catch up the torn fibres of the levator ani, whether the lesion is central or into one or the other sulcus. If the tear is into the recto-vaginal septum, that must be carefully adjusted first by, at least two sutures, which will restore the torn sphincter ani, and then adjust the rest of the wound as in the less severe cases." He says the cervical operation is simple, requiring neither assistant, anæsthetic, nor even a speculum.

In discussing the paper, Dr. H. T. Machell said that it had been the accepted rule for years to immediately repair perineal tears; why not as well tears in the vaginal walls? He agreed that systematic examination of the patient should be made after labor. A perineal tear may be stitched with a common darning-needle in two minutes. One ought to carry a curved needle to stitch tears in the vaginal wall. Catgut was probably the best suture to use. Of late silkworm gut has been employed, but difficulty is sometimes experienced in removing the stitches. He thought the sooner cervical lacerations were repaired the better, except where there were small tears, which he would leave alone.

Dr. A. A. Macdonald referred to the ease with which these tears could be detected. All agreed that lacerations of the perinæum should be repaired at once; not so regarding cervical lacerations. His opinion was that immediate repair should only be done when the tear was extensive, with hæmorrhage. It was comparatively easy to detect a tear, but not so easy one that should be stitched; very often there was a series of tears, and it was difficult to find a place to put the stitch in. For his part, he preferred both an assistant and an anæsthetic when operating on these cases. He thought, too, the time had gone by for doing operations with darning-needles and without assistance. He spoke advisedly, because he commenced practice in the country, where he was obliged to do things alone. So, in sewing up the perinæum, he favored anæsthesia. He was more afraid of a kicking patient than of an anæsthetic. If the patient were much exhausted, he would not recommend immediate cervical repairs. He drew attention to the fact that a tear which seemed quite extensive at first would after a few days become so small as not to require attention.

Dr. Adam Wright said he believed in repair of the perinæum, with as great care as possible, at once. He remembered of only one case where, ten days after labor, union of the granulating surfaces took place. He had tried all sorts of needles, and had decided that the straight needle was best; and he had found nothing better than the darning-needle, which he always carried. Regarding tears higher up, he preferred, in view of the danger of septic trouble, not to insert the fingers any more than was absolutely necessary.

Dr. Temple said that he did not agree that the position on the side was the best for the patient to assume, but on the back; for then the torn parts could be more readily brought together. When on the side the introduction of the lower needle was easy enough, but the upper was not introduced so easily. This was his experience. He preferred the long curved needle, so as to secure in the bite the contracted muscular tissue. He did not believe in stitching small cervical tears; even those half an inch in extent at the time of delivery in forty-eight hours afterward would dwindle down to the sixteenth of an inch. By leaving them alone he considered there was a minimum chance of sepsis.

Dr. Fenwick, replying, said, regarding cervical repairs, if the artery to the cervix were torn, stitching up was a matter of necessity. In other cases it was a matter of election. He maintained that examination should always be made, but with perfectly clean hands. Many cases in which the perinæum was badly torn were not visible externally.

NARCOTIC ADDICTION.

Dr. Stephen Lett read a paper with this title. He said that the ever-increasing prevalence of this evil, so seriously disturbing physical, mental, and moral life, demanded more scientific treatment than has been given it. The use of drugs only created a double addiction. Skilful treatment in a well-regulated institution, with the help of the patient, free from organic disease, would result in cure. Taking opium as a typical narcotic, the essayist outlined the various forms of treatment extant. The Levantine method, where the use of the drug was cut off abruptly, caused the patient indescribable agony and irreparably scarred the nervous system. The Erlenmeyer method consisted in withdrawing the drug in ten days, giving bromides *ad libitum*, and restraining the patient forcibly. This was a rude method, too, entailing great suffering on the patient. The Laehr-Burkardt method very gradually and methodically withdrew the drug, at the same time sustaining the patient by tonics, good nutrition, and hygienic environment, using suitable hypnotics. When one-tenth of a grain every twenty-four hours was reached, all opiate was abandoned. At this point

the patient passes through a crisis, though the symptoms would be infinitely less marked than in the other methods. Diarrhoea, vomiting, sneezing, and insomnia were the principal symptoms. The Lett method is a modification of the last, gradually reducing the amount to an infinitesimal dose, based on a knowledge of the exceeding sensitiveness of the nervous system to the smallest reduction of the drug. He reduces the amount till he reaches $\frac{6}{1000}$ of a grain. The break can then be made without a crisis.

Dr. Trimble asked if hypnotic suggestion had been tried.

Dr. Dickson asked whether a reduction of one-half a grain per day would be too rapid or not. He also asked what hypnotics were used.

Dr. W. H. Harris asked as to the cause of the prevalence of the morphia habit. Was the medical profession responsible?

Dr. J. Noble asked as to the value of strychnia.

Dr. D. Clark said the use of narcotics had become a serious matter. He thought it very unwise for the general practitioner to let the patient know he was taking morphia. It might be withdrawn in ten days or two weeks. The vitality of the person who has used it for years would be low, and its sudden withdrawal would be serious. He had seen deaths follow its too sudden withdrawal.

Dr. Lett said that hypnotic suggestion was absolutely worthless. If a patient were taking eight grains a day, he would not withdraw it as fast as one-half a grain at a time. If the patient were taking thirty or forty grains a day, he would reduce one grain every three days at first, and, when the patient got down to half the amount he had been habitually taking, he would reduce one grain in six days. He would take at least a month to get the patient off the last grain. He had found good results from the use of trional as a hypnotic.

Dr. Spohn asked as to the advisability of giving stimulants when cutting off the morphia.

Dr. Dickson asked as to the value of chloride of gold.

Dr. Bromley asked if the drug should be given at all to quiet down the restlessness of the crisis.

Dr. Lett said that under no conditions whatever should alcoholic liquors be given. If a stimulant was absolutely necessary, sparteine, hypodermically, might be given. There was not much bichloride of gold in that so-called treatment. The principal drugs in the treatment were strychnine and atropine. As to returning to the opium in the crisis, if the crisis occurred after breaking from a small dose—say, one-tenth of a grain—other sedatives should be employed, if necessary. But, if the drug were cut off at a higher point, he would make the patient comfortable by restoring the opium.

Dr. N. H. Beemer read a paper on

PUERPERAL INSANITY.*

Dr. Hodge read a paper on

THE USE OF THE STOMACH TUBE.

He described the method of introducing the tube. He then spoke of its various uses: examination of the stomachic contents; the distension of the viscus to ascertain whether dilatation were present; and to wash out the stomach—a very important treatment for various gastric affections. The essayist then referred to the various conditions in which the tube was manifestly helpful. He related several typical cases in which lavage had resulted in an almost sudden disappearance of symptoms. In most cases he advocated its daily use for some time. After its use a few times, the patient would be able to pass the tube himself.

Dr. McPhedran said that the tube was a necessity for treatment, but was of more especial use in diagnosis. In nervous females the better plan was to pass the tube without informing them what was going to be done. He referred to a case supposed to be malignant stricture of the cesophagus on account of inability to pass tube, but he found with a little persistence and gentle pressure that he could pass it through, and was able to withdraw it without its being gripped.

Dr. MacCallum related a case where he had used the tube, withdrawing an ordinary basin full of pure gastric juice.

Dr. Noble said in his experience it was very hard to induce his patients to try the treatment.

Dr. Hunter referred to a hysterical patient who was unable to swallow food, but upon presenting the tube for her to swallow she was completely cured.

Dr. Doolittle recommended the use of glycerine as a lubricant.

INTELLIGENT USE OF RECTAL INJECTIONS, WITH IMPROVEMENT OF
ORDINARY ENEMA SYRINGE.†

This paper, written by Dr. Burrows, Lindsay, was read by title.

A CASE OF MORPHŒA.

Dr. A. McPhedran presented a patient with the above disease. After outlining the patient's family and personal history, he pointed out that the attack commenced by the appearance of a leucodermic spot on the forehead, oval in shape, which spread downward and then upward. In two or three months a ridge formed on top of the scalp, and complete alopecia occurred over the part. Since Dr. McPhedran had seen him, the affected part had not increased in size. Atrophy had, however, taken place,

* Will appear in the August issue.

† Will appear in a subsequent issue.

a furrow taking the place of the ridge. The hair was beginning to reappear, and the thickening was rapidly disappearing, leaving a slightly yellowish discoloration. He then described the pathology of the disease.

Dr. J. T. Fotheringham presented a patient suffering from pseudo-hypertrophic muscular paralysis. Patient's father was intemperate. Two brothers suffer similarly. His maternal grandfather suffered in the same way. Just previous to puberty there was an exacerbation of symptoms, which remitted for eight or nine years following. The calves of the legs measure more than the hips by an inch, and the gluteal muscles seem atrophied. Hypertrophy of the deltoids and atrophy of the pectorals seen in advanced cases are wanting. Mentality is unimpaired. Reaction of degeneration not present. Patellar reflex gone and no ankle clonus present. In sitting down drops into the chair suddenly. The attempt to rise from kneeling is the characteristic "climbing upon his legs." The essayist then discussed the etiology, prognosis, and treatment. Regarding the pathology some authorities claim that the disorder is a primary myopathy, and do not believe chronic anterior poliomyelitis to be a starting point. Osler gives to a group of cases, including this, the name given by Erb—primary muscular dystrophy, including two types, the classification being based mainly upon the order, the invasion, and the distribution of the affected muscles. The apparent hypertrophy is said to be due to an increase in the amount of interstitial fat, and to proliferation of interstitial connective tissue and sarcolemma, the contractile elements of the muscle being reduced in amount, frequently appearing fissured lengthwise.

SURGICAL SECTION.

Dr. Welford, of Woodstock, second vice-president, occupied the chair ; Dr. J. C. Mitchell, of Enniskillen, acting as secretary.

Dr. Howitt, of Guelph, read a paper on

AN OPERATIVE PROCEDURE FOR SPINA BIFIDA.

The doctor came to the conclusion, previous to his first operation, that

(1) A most important function of the cerebro-spinal fluid is to regulate tension of blood supply to the nerves.

(2) That spinal membranes, and, therefore, walls of spina bifida, resemble the peritoneum in being able, on irritation, to form adhesions. This proves that the communication between sac and cord may be closed, not over skin, but immediately at pedicle of cyst.

(3) It is quite natural to understand that the delicate sac of a spinal hernia, when it impinges against the skin, receives sufficient resistance to cause it to extend laterally between the skin and superficial fascia. Thus a large sessile spina bifida may have so small and imperfect a communica-

tion that the tumors may be drained without materially disturbing the tension of the cord. This accounts for occasional cases by tapping, irritating injections, and other equally unscientific modes of treatment.

(4) That the amount of bone deficiency and implication of nervous tissue can be determined, not by the size of the tumor, but by the general condition of the patient and the extent of paralysis below. The parts of the cord in the sac are functionally destroyed, and removal will not increase the paresis.

(5) Spina bifida is frequently accompanied by other congenital deformities, such as talipes, sphincter paresis, hydrocephalus, and paraplegia. The last named is always, and hydrocephalus generally, incompatible with viability. Hence, from the first, quite a number of the cases are beyond the possibility of a cure.

(6) That no operation will successfully stand repeated trials by different operators, unless in its performance a profession is made to prevent disturbance of the tension of the cord.

(7) The higher the tumor is placed on the spine, the more delicate are the walls of its sac, the greater the irritation to it by the movements of the child, and the more difficult it is, other things being equal, to treat.

The doctor then gave the salient points of his procedure, concluding by reading notes of seven cases treated by the method. Four of the patients are alive and well to-day, one made complete recovery, but died later of meningitis, another had hydrocephalus at time of operation and died in a month, and only one case of death could be attributed to the operation.

Dr. Ross, of Huntsville, reported a case on which he had operated. The patient was a child aged eight. Another physician had aspirated, with little or no relief. The tumor was about the size of a pigeon's egg. After dissecting down to the sac he put a heavy catgut ligature around the tumor, but did not tighten it till he had incised the tumor to see if there was any portion of the cord included. To be doubly sure, the patient was allowed to come out of the anæsthetic condition and have the reflexes examined before the sac was removed.

Dr. Howitt closed the discussion.

TUMORS OF THE BLADDER.*

This was the title of a paper by Dr. F. Grasett, of Toronto.

Dr. Groves referred to the great difficulty in diagnosing tumors of the bladder. He agreed the procedure followed by Dr. Grasett was the correct one.

Dr. E. E. King spoke of the value of the cystoscope in these cases, especially in making an early diagnosis. He related the history of a case in which its great value was shown.

*Will appear in a subsequent issue.

AN OPERATION FOR HARE LIP.

A paper with this title was presented by Dr. Groves, of Fergus. He first criticized the paring-off process recommended in the books, by saying that where malformation by defect exists it was not justifiable to sacrifice any tissue. The method he has employed for some nineteen years he expresses thus: The two defects to be overcome are a notch on the lower border and a thinness of the lip at the line of union. To correct the former, he transfixes the lip on each side with a narrow blade and cuts horizontally across so as to form flaps, which, when brought together, leave a projection instead of a notch. Next an incision is made on each side to a depth of a little more than half the thickness of the lip along the junction of the skin and mucous membrane, extending from the raw edge below to the apex of the fissure. In making these incisions, the knife should not be held perpendicular to the surface of the lip, but inclined at an angle, so that the deepest part of the incision may be further from the fissure than the superficial part. The two flaps are now turned back and two hare-lip pins introduced, one about the junction of the upper and middle thirds of the wound, and exactly at the bottom of it; the other across the angle of the flaps, at a depth of a little more than half the thickness of the lip. The ordinary figure of eight will bring the cut surfaces together; but for the best results, it is necessary to bring the edges of the skin and mucous membrane into exact apposition by a sufficient number of superficial sutures. The same principle he applies to the treatment of vesico-vaginal and recto-vaginal fistulæ.

Dr. Bingham described the ordinary flap method, which he preferred to the use of the pins.

Dr. Peters said he did not like the use of the pins, but favored rather Dr. Bingham's plan.

Dr. Powell said that the pin should not be left in more than twenty-four hours. The harm came from its abuse, not its right use. But he considered that with the use of silkworm gut or horsehair the pin was not needed.

SOME REMARKS ON THE OPERATION FOR CLEFT PALATE.*

Dr. G. R. McDonagh read a paper on this subject, in which he described most of the important details of the operation, particularly in reference to those cases in which more or less of the hard palate was involved.

*Will appear in a subsequent issue.

(To be concluded next month.)

RESULTS OF FINAL EXAMINATIONS, 1895.

UNIVERSITY OF QUEEN'S COLLEGE.

M.D. and C.M.—G. A. Abbott, Kingston ; A. J. Ames, Codrington ; G. H. Berry, Seeley's Bay ; T. J. Butler, Deseronto ; R. A. Craft, Deseronto ; J. G. Cranston, Arnprior ; Jennie Drennan, Kingston ; T. H. Farrell, Kingston ; H. P. Fleming, Ottawa ; F. C. Hagar, Gananoque ; N. R. Henderson, Kingston ; A. W. Jones, Watertown, N.Y. ; R. J. L. Kyle, Morewood ; W. O. R. Lofthouse, Kingston, Jamaica ; E. H. Marselis, Bouck's Hill ; W. H. Merriman, Latimer ; J. A. McBroom, Washburn ; H. S. McDonald, B.A., Kingston ; A. McEwen, Hulbert ; H. A. McKeown, Belleville ; A. Robinson, Kingston ; G. A. Stewart, Glenside ; H. A. Tillman, Kingston, Jamaica ; W. C. Whittaker, North Williamsburg.

House Surgeons, Kingston General Hospital.—J. C. Gibson, M.A., Kingston ; H. G. Murray, Kingston ; E. W. Teeple, Watertown, N.Y. ; A. A. Metcalfe, Almonte.

University Medallists.—W. C. Whittaker, Williamsburg ; T. H. Farrell, B.A., Kingston.

UNIVERSITY OF DALHOUSIE.

M.D. and C.M.—Harry Gray Fairbanks, John Clyde McDonald, Catherine Joanna McKay, Ernest Fraser Moore, Cranswick Burton Munro, George Nelson Murphy, Henry Osmond Simpson.

COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO.

W. L. T. Addison, Toronto ; A. W. Aiken, Orangeville ; Mary E. Allen, Fordwich ; N. J. Amyot, St. Thomas ; George W. Brown, Aylmer West ; Sydney B. Bean, Bright ; James Becket, Thamesville ; J. W. Brien, Essex Centre ; G. W. Badgerow, Eglinton ; J. H. Cormack, Kingston ; James G. Caven, Toronto ; M. Currie, Picton ; J. A. Cowper, Welland ; R. A. Craft, Chisholm ; C. D. Chapin, Brantford ; W. J. Chapman, Toronto ; W. Douglas, Chatham ; C. A. Drummond, Meaford ; R. A. Downey, Toronto ; Jeanie I. Dow, Fergus ; F. C. Delahey, Pembroke ; George Elliott, Toronto ; A. S. Elliott, Scotch Block ; W. A. Feader, Iroquois ; J. H. Ferguson, Toronto ; T. H. Farrell, Kingston ; H. M. Featherstone, Nelson ; S. E. Fleming, Millbank ; T. F. Flaherty, Thorndale ; J. F.

Gibson, Kingston ; A. Gibson, Orton ; C. W. F. Gorrell, Brockville ; F. C. Hagar, Kingston ; F. C. Harris, Tuscarora ; J. C. Hutchison, Fordwich ; T. B. Hewson, Port Hope ; Jennie Hill, Bond Head ; G. W. Hall, Little Britain ; J. N. Hutchison, London ; W. Hird, Uxbridge ; A. J. Hunter, Toronto ; J. F. James, Strathroy ; C. G. Johnston, Athens ; C. J. Kelly, West Flamboro ; E. T. Kellam, Seaforth ; W. D. Keith, Toronto ; M. O. Klotz, Ottawa ; J. B. Lancaster, Culloden ; A. C. Lambert, Toronto ; A. Langrill, Ohsweken ; J. G. Lamont, Ripley ; W. C. Laidlaw, Toronto ; E. H. Marselis, Bouck's Hill ; A. K. Merritt, Scotland ; A. A. Milligan, Toronto ; J. D. Monteith, Stratford ; Daisy M. Macklin, Stratford ; W. McDonald, Galt ; T. McCrae, Guelph ; F. McLennan, Lochlash ; W. B. McKechnie, Aberdour ; Annie B. McCallum, Gananoque ; H. S. McDonald, Kingston ; J. A. McBroom, Washburn ; J. A. McNiven, Dorchester ; M. McPhail, Sonya ; T. W. G. McKay, Toronto ; W. T. McArthur, Moorefield ; A. E. Northwood, Chatham ; J. I. Pratt, Heathcote ; Rose Pringle, Fergus ; F. Parker, Stratford ; H. G. Pickard, Glammis ; H. M. Paterson, Rodney ; J. H. Rätz, Elmira ; E. K. Richardson, Flesherton ; F. S. Rounthwaite, Collingwood ; H. A. Stevenson, London ; J. Sheahan, Newark ; A. A. Small, Toronto ; D. W. Shier, Cannington ; Maggie Symington, Brighton ; D. R. Simpson, Hamilton ; T. H. Sneath, Midhurst ; E. Seaborn, London ; J. G. M. Sloan, Annan ; H. E. Tremayne, Mimico ; F. L. Vaux, Brockville ; R. J. Walker, Strathroy ; W. C. Whitaker, North Williamsburg ; F. C. Wallbridge, Belleville ; G. S. Young, Stouffville ; J. M. Zumstein, Elcho.

TRINITY MEDICAL COLLEGE.

Final Fellowship Degree.—Certificates of Honor ; 75 per cent. and over on the total.

Candidates who obtained 75 per cent. and over—Frederick Parker, Alex. C. Lambert, James C. Hutchison, Charles A. Drummond, J. G. Lamont, Robert J. Walker, H. George Pickard, Henry McC. Featherstone. 70 per cent. and over—Frederick C. Harris, Henry E. Tremayne, Malcolm McKinnon, Rowland T. S. Gilmore, George Elliott, John H. Ferguson, Vaux Francis Leonard, Robert Wm. Shaw, Joseph D. Monteith, Alexander McKay, Henry C. Pearson, T. H. Sneath. 60 per cent. and over—Christopher G. Johnson, Frank S. Rounthwaite, Donald Albert Cameron, John A. Kerr, Frank McLennan, Daniel W. Shier, James D. McKay, David D. Duggan, Frederick W. Whiting, George W. Brown, Ira A. Tripp, John Albert Cook, Arthur A. Milligan. Passed—Wm. James Burden, Wm. T. Clemes, George F. Pierce, Harry R. Pearce, C. Lambert, B. Stammers, Apollos F. Phillips, Hugh A. Stevenson, James R. Durham.

Dr. Sheard's prize in physiology for the first year, H. A. Johnston.

Scholarships.—First year : 1st, \$50, E. Shoemaker ; 2nd, \$30, R. G. McConochie ; 3rd, \$20, H. A. Johnston. Second year : 1st, \$50, J. S. McEachren ; 2nd, \$50, Geo Cairnes.

Medals.—The Gold Medal, Frederick Parker ; 1st Silver Medal, Alexander Lambert ; 2nd, Jas. C. Hutchison.

TRINITY UNIVERSITY.

Final Examination for M.D., C.M.—Gold medal and certificate of honor—F. Parker.

Silver medal and certificate of honor—J. C. Hutchison.

Certificates of Honor.—J. G. Lamont, A. C. Lambert, F. L. Vaux, F. G. Wallbridge, F. W. Whiting, F. C. Harris.

The following are also in *Class I.*—J. H. Ratz, G. Elliott, Miss M. E. Allen and H. E. Tremayne, equal ; J. D. Monteith, C. A. Drummond, D. W. Shier, D. A. Cameron and T. B. Hewson, equal ; R. T. S. Gilmore, J. F. Battell.

Class II.—J. N. Hutchison and H. G. Pickard, equal ; W. Brown and A. Mackay, equal ; H. M. Featherstone, M. M. McKinnon, W. J. Burden, J. A. Cook, H. S. Krug, and R. W. Shaw and T. H. Sneath, equal ; F. McLennan, W. T. Clemes, J. A. Kerr, Miss M. Symington, G. W. Brown and J. H. Ferguson, equal ; J. A. Trip, J. B. Leeson and D. W. McPherson, equal ; R. J. Walker, J. R. Durham and H. Paine, equal ; C. G. Johnson, and J. D. McKay and H. E. Wallace, equal ; H. C. Pearson, W. G. McKechnie.

Class III.—F. S. Rounthwaite, Miss E. Hurdon, D. D. Duggan, G. W. Hall, F. G. Grosett, and A. A. Milligan and W. B. McKechnie, equal ; H. A. Stevenson and J. Menzies, equal ; J. W. Routledge, T. W. Kirby, Miss M. MacMillan, and A. F. Phillips and J. F. Drain, equal ; J. W. Mehan, Miss D. Macklin, J. A. Malloy, A. W. Aiken, W. D. McNab, Miss R. Pringle.

In the primary the first silver medal was taken by J. S. McEachren, and the second by G. Cairns.

THE WOMEN'S MEDICAL COLLEGE, TORONTO.

Diplomas—Misses M. E. Allen, Fordwich ; E. Hurdon, Toronto ; D. M. M. Macklin, Stratford ; M. L. Macmillan, Toronto ; R. Pringle, Ferguson ; M. P. Symington, Brighton.

Some of the students went up for Trinity College examinations, with the following results :

Degree of M.D., C.M.—Miss M. E. Allen, with first-class honors ; Miss M. P. Symington, with second-class honors ; Miss S. Hurdon, Miss D. M. M. Macklin, Miss Margaret L. Macmillan, Miss R. Pringle.

M'GILL UNIVERSITY, MONTREAL.

C. C. Alexander, Fredericton, N.B. ; J. H. Allen, B.A., West Osgoode, Ont. ; D. P. Anderson, B.A., New Liverpool, Que. ; X. L. Anthony, Berwick, N.S. ; J. W. Bailey, B.A., Northfield, Minn. ; J. T. Basken, Dunrobin, Ont. ; E. D. Beatty, Nepean, Que. ; C. W. Bishop, Montreal ; T. H. Blow, South Mountain, Ont. ; R. B. Boucher, Peterboro, Ont. ; C. W. Bouck, Inkerman, Ont. ; H. J. Chapman, Port Elgin, N.B. ; M. E. Commins, B.A., St. Stephen, N.B. ; W. Cowie, B.A., Montreal ; A. Cruikshank, Inverness, Que. ; J. L. Day, B.A., Montreal ; W. L. Ellis, St. John, N.B. ; W. A. Feader, Iroquois, Ont. ; J. W. Flinn, Montreal ; C. H. Fox, Oxley, Ont. ; C. J. St. Gallant, Charlottetown, P.E.I. ; J. H. Gleason, Cowansville, Que. ; J. P. Grant, New Glasgow, N.S. ; A. Gun, Durham, Ont. ; R. Hamilton, Bright, Ont. ; I. L. Hargrave, B.A., Rose-dale, Man. ; R. de L. Harwood, Vaudreuil, Que. ; L. Hogg, B.A., London, Ont. ; J. H. Hogle, Montreal ; R. A. Kerry, Montreal ; J. H. King, Chipman, N.B. ; H. T. Knapp, B.A., Sackville, N.B. ; M. Lauterman, Montreal ; A. A. MacLeay, B.A., Danville, Que. ; G. F. May, Montreal ; C. B. Keenan, Ottawa, Ont. ; H. G. Kemp, Brighton, Ont. ; A. R. Kerr, Montreal ; H. S. Kirby, Ottawa, Ont. ; J. H. Laidley, Montreal ; H. Lennon, B.A., Montreal ; J. R. Le Touzel, Goderich, Ont. ; C. D. Lloyd, Lockeport, N.S. ; J. J. F. Macauley, River Dennis, N.S. ; E. E. MacLeod, Vancouver, B.C. ; D. D. McAllister, Belle Isle, N.B. ; E. C. D. McCallum, Maxville, Ont. ; H. K. McDonald, Pictou, N.S. ; J. G. McDougall, New Glasgow, N.S. ; A. A. McLennan, Lancaster, Ont. ; D. A. McLennon, Fournier, Ont. ; D. McPherson, Montreal ; J. D. McRae, Glennevis, Ont. ; N. Hallock, Moose Jaw, Assa. ; M. Maloney, Pembroke, Ont. ; R. Mason, Dalesville, Que. ; E. A. Merkley, Morrisburg, R. J. Midgley, Woodstock, Ont. ; J. A. Milburn, Peterboro, Ont. ; C. H. Morris, Windsor, N.S. ; L. H. Morse, Bridgetown, N.S. ; D. Patrick, Montreal ; A. R. Pennoyer, Cookshire, Que. ; A. H. Prescott, Queensbury, N.B. ; G. E. Robert, Holyoke, Mass. ; A. T. Robertson, Agassiz, B.C. ; D. M. Robertson, Perth, Ont. ; F. M. Robertson, Chatham, Ont. ; F. E. Rogers, Brighton, Ont. ; J. J. Roy, New Glasgow, N.S. ; E. J. Ryan, St. Kitts, W.I. ; W. T. Scott, Montreal ; J. S. Seaton, St. John, N.B. ; A. A. Skeels, Montreal ; H. Smith, Acadia Mines, N.S. ; R. A. Smith, Durham, Ont. ; O. C. S. Stackhouse, Lachute, Que. ; H. M. Stanfield, Truro, N.S. ; G. R. Sutherland, Hudson, N.S. ; J. E. Thomas, Montreal ; J. A. Thompson, Kinnear's Mills, Que. ; J. A. Tierney, Fallowfield, Ont. ; J. B. Trainor, Kelly's Cross, P.E.I. ; F. R. Wainwright, Montreal ; S. F. A. Wainwright, Montreal ; E. J. Williams, Montreal ; J. H. Merrick, Merrickville, Ont. ; N. McKinnon, Park Hill, Ont. ; G. J. McNally, Upper Kingsclear, N.B. ; R. W. Neill, Aylmer, Ont. ; W. Oliver, B.A., Rockburn,

Ont. ; B. S. Price, King's Co., N.B. ; D. D. Quay, Port Hope, Ont. ; W. G. Reilly, Ottawa, Ont. ; J. E. Robertson, Morrisburg, Ont. ; E. H. Saunders, Woodstock, Ont. ; H. M. Shaw, Berwick, N.S. ; C. W. Vipond, Montreal ; D. F. Walker, Huntingdon, Que. ; J. H. Watson, B.A., Barbadoes, W.I. ; W. W. Wickham, Summerside, P.E.I. ; J. A. Williams, Carleton Place, Ont. ; D. M. Wood, Kenmore, Ont. ; H. K. Wright, Montreal.

THE UNIVERSITY OF TORONTO.

Degree of M.B.—W. L. T. Addison, Toronto ; A. W. Aiken, Toronto ; N. J. Amyot, Toronto ; S. B. Bean, Bright ; J. G. Caven, Toronto ; C. D. Chapin, Brantford ; W. J. Chapman, Toronto ; M. Curry, Picton ; F. C. Delahey, Pembroke ; W. Douglas, Chatham ; Miss J. I. Dow, Fergus ; A. Downing, Woodstock ; R. A. Downey, Toronto ; A. S. Elliott, Scotch Block ; S. E. Fleming, Millbank ; A. Gibson, Orton ; F. G. Grosett, Jamaica ; G. W. Hall, Little Britain ; W. Hird, Uxbridge ; A. J. Hunter, Toronto ; J. N. Hutchison, Toronto ; T. W. Jeffs, Queensborough ; W. D. Keith, Toronto ; E. T. Kellam, Seaforth ; M. O. Klotz, Ottawa ; W. C. Laidlaw, Toronto ; J. R. Lancaster, Culloden ; A. S. Langrill, Oswegan ; L. Lawrason, Dundas ; J. A. Malloy, Brampton ; A. K. Merritt, Scotland ; H. W. Miller, Orillia ; G. E. Millichamp, Toronto ; G. Musson, Toronto ; W. T. McArthur, Moorefield ; F. McConnell, Toronto ; T. McCrea, Guelph ; W. McDonald, Galt ; T. W. G. McKay, Toronto ; W. B. McKechnie, Aberdour ; J. A. McNiven, Dorchester ; M. McPhail, Sonya ; D. W. McPherson, Toronto ; J. K. McQuarrie, Orangeville ; R. T. Noble, Norva ; A. E. Northwood, Chatham ; C. A. Orr, Goderich ; H. Paine, Toronto ; H. McL. Paterson, Rodney ; J. I. Pratt, Heathcote ; J. H. Ratz, Elmira ; E. K. Richardson, Toronto ; J. Sheahan, Newark ; G. D. R. Simpson, Hamilton ; J. G. Sloane, Annan ; A. A. Small, Toronto ; M. B. Smith, Glanford ; W. Thorn, Dunbarton ; A. Webb, Kettleby ; E. A. White, Toronto ; G. S. Young, Stouffville ; J. M. Zumstein, Elcho.

Book Reviews.

MEDICAL NURSING. By the late James Anderson, M.D., F.R.C.P., edited by Ethel F. Lamport, Associate of the Sanitary Institute and the British Institute of Public Health, etc. London : H. K. Lewis, 136 Gower street, W. C. 1894.

"Medical Nursing" is a readable little book of nearly two hundred pages. It is modern in adaptation, and should be largely read by hospital and asylum nurses ; and is also sufficiently elementary to be of value for home study for every educated mother of a family.

The physiology of common life is here dealt with in its relation to hygiene and care of the sick. The feeding of the patient and the management of disorders of digestion, circulation, respiration, and of the nervous system are important features. There is also a chapter on the significance of temperature, and another on infection and fevers.

NOTES ON THE NEWER REMEDIES, their therapeutic applications and modes of administration. By David Cerna, M.D., Ph.D., Demonstrator of Physiology and Lecturer on the History of Medicine in the Medical Department of the University of Texas ; formerly Demonstrator of, and Lecturer on, Experimental Therapeutics in the University of Pennsylvania, etc. Second edition, enlarged and revised. Philadelphia : W. B. Saunders, 925 Walnut street, 1895.

In these days, when so many new remedies are discovered, the busy practitioner feels the need of a work of this kind. The list of drugs, mostly unofficial, is fairly complete, but we do not understand why the author has omitted a description of such substances as zinc sulpho-carbolate and strontium iodide. We were also a little surprised at finding in the list nitroglycerine, resorcin, acetanilide, etc., remedies which have been used by the profession generally for the last decade, and all fully described in all the more recent works on therapeutics. A few mistakes in dosage have crept into the work. We might instance the case of creasote-carbonate, where the daily dose given is seven and a half to fifteen drachms, evidently a typographical error. However, the book, taken as a whole, is a good one, and should be well received by the profession. The remedies are conveniently arranged alphabetically, and each drug is very shortly described as to its chemical and physical properties, physiological action, therapeutic application, and modes of administration. Where known, the structural formulæ of the compounds are correctly given. The work concludes with a very useful index of diseases, where the remedies described in the work are classified as to their therapeutic application in different diseases.

INTERNATIONAL CLINICS. A Quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Genito-Urinary Surgery, Gynæcology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otolary, and Dermatology. By Professors and lecturers in the leading medical colleges of the United States, Germany, France, Great Britain, and Canada. Edited by Judson Daland, M.D. (University of Pennsylvania), Philadelphia, Instructor in Clinical Medicine and Lecturer on Physical Diagnosis in the University of Pennsylvania; Assistant Physician to the Hospital of the University of Pennsylvania; Physician to the Philadelphia Hospital; Fellow of the College of Physicians of Philadelphia. J. Mitchell Bruce, M.D., F.R.C.P., London, England, Physician to, and Lecturer on the Principles and Practice of Medicine in, the Charing Cross Hospital. David W. Finlay, M.D., F.R.C.P., Aberdeen, Scotland, Professor of Practice of Medicine in the University of Aberdeen; Physician to, and Lecturer on Clinical Medicine in, the Aberdeen Royal Infirmary; Consulting Physician to the Royal Hospital for Diseases of the Chest, London. Volume I., Fifth series, 1895. Philadelphia: J. B. Lippincott Company, 1895.

The clinical lectures in this volume are of a superior quality. They are exceedingly practical. It is impossible to review the whole number, but one clinic of very practical use we will refer to, "The Treatment of Lateral Curvature of the Spine," by Dr. Edward H. Bradford, Assistant Professor of Orthopædic Surgery in Harvard Medical School, which is graphically described. The common occurrence of this affection makes its importance more appreciated, while errors of diagnosis are frequent. Dr. Bradford has gone fully into causation—faulty position in sitting at school and home, lack of athletic exercise, poor assimilation, etc.; described the *anatomical peculiarities*, and *how to examine cases* and the treatment. The clinic is most carefully illustrated by photos and diagrams that will be of greatest aid in diagnosis. The paper and binding are an improvement on the former series.

A TEXT-BOOK OF THE THEORY AND PRACTICE OF MEDICINE. By American Teacher. Edited by William Pepper, M.D., LL.D., Provost and Professor of the Theory and Practice of Medicine and Clinical Medicine in the University of Toronto. In two volumes. Illustrated. Volume II. Pages 1,046. Philadelphia: W. B. Saunders, 1925 Walnut street.

Volume II. of the text-book of the theory and practice of medicine is fully up to the standard of excellency of the first volume. It opens with a complete article by Dr. William H. Welch on "Bacteria Infection and Immunity." The known facts concerning the toxic products of bacteria are discussed at some length, and here one will find the latest information upon the many pathological questions concerning infectious diseases.

Dr. Henry M. Lyman, in a series of articles, deals with the principal arthritic diseases, biliary lithiasis, gravel, obesity, diabetes, gout, and rheumatism. His article on obesity is a very interesting one, and contains many practical hints to the physician. Bouchard bases the treatment of obesity upon the condition of the urine.

When nitrogenous excreta are present in excessive quantity, the amount of albuminous food should be reduced. When the urea is deficient in the urine the quantity of food should be at first diminished, and then increased as con-

valescence progresses. In all cases the quantity of fat, starch, and sugar in the food should be five times greater than the amount of nitrogenous nutriment.

Diseases of the blood are dealt with by Dr. Wm. Osler, as well as those of the suprarenal capsulis and ductless glands. These articles are written in his usual lucid style and illustrated by well-executed plates.

Dr. Wm. Pepper writes the articles upon the different forms of heart affections, as well as those treating of diseases of the whole alimentary tract.

Diseases of the nose, bronchi, lungs, and pleura are dealt with by Dr. James C. Wilson. Dr. James W. Holland's article on "Practical Urinary Examination" will be found one of great clinical usefulness. In a clear manner he describes the most reliable tests, and his notes on the practical import contains many useful hints and much valuable information.

Diseases of the lungs and kidneys will be found fully described by the pen of Dr. Francis Delefield. The concluding articles of this volume are upon diseases of the pelvis, liver, and pancreas, from the authoritative pen of Dr. Reginald W. Fitz.

As a whole, this text-book of medicine is, without doubt, the most valuable work on internal medicines that has been published in America.

The following Books and Pamphlets have been received :

SURGICAL PATHOLOGY AND THERAPEUTICS. By John Collier Warren, M.D., Professor of Surgery in Harvard University, and Surgeon to the Massachusetts General Hospital. 832 pages. Illustrated. Subscription price, \$7.00. Philadelphia : W. B. Saunders, 925 Walnut street.

EPITOMES OF MODERN SURGICAL PROGRESS. For Students and Practitioners. Urinary Surgery. By E. Henry Fenwick, F.R.C.S. Eng. 220 pages. Illustrated. \$1.00. Bristol : John Wright & Co.; Toronto : J. A. Carveth & Co.

THE RESULTS OF DOUBLE CASTRATION IN HYPERTROPHY OF THE PROSTATE, with a consideration of allied methods, and a table of cases. By J. William White, M.D. Philadelphia : Reprinted from *Annals of Surgery*.

TUBERCULOSIS IN THE ANO-RECTAL REGION. By Thomas H. Manley, M.D., Visiting Surgeon to Harlem Hospital, New York. St. Louis, Mo.: Reprinted from *The Medical Brief*. 1894.

THE DIAGNOSIS OF PREGNANCY DURING THE FIRST THREE MONTHS. Read, Nov. 14th, 1894. Reprinted from the Transactions of the Philadelphia County Medical Society. Also

CÆLIOTOMY FOR PUERPERAL SEPTICÆMIA AND PERITONITIS. Read before the New York Academy of Medicine, Feb. 28th, 1895. Reprinted from the *American Gynecological and Obstetrical Journal*. Also

REMARKS ON THE TREATMENT OF INEVITABLE ABORTION. Reprinted from *Codex Medicus Philadelphia*. By Charles P. Noble, M.D., Surgeon-in-Chief of the Kensington Hospital for Women, Philadelphia.

Medical Items.

DR. C. C. RICHARDSON is practising at Mount Albert.

DR. THOMAS W. JEFFS (Tor., '95) was married on June 29.

DR. W. F. MEIKLE, of Lansdowne, was married on June 12.

DR. J. H. WESLEY, formerly of Keswick, has removed to Newmarket.

DR. A. F. MCKENZIE, formerly of Toronto, is now practising in Mitchell.

DR. J. R. SMITH has removed from Glanford to Conewaugo Valley, N.Y.

DR. D. C. MEYERS, of Toronto, started for Europe, July 3. He will spend a few weeks in Paris.

DR. DAVID ROBERTSON, of Milton, has been appointed Associate Coroner for the county of Halton.

DR. H. B. ANDERSON has returned to Toronto, after spending a few weeks at Johns Hopkins Hospital.

DR. FREDERICK C. HEATH, of Brantford, has been appointed Associate Coroner for the county of Brant, including the city of Brantford.

DR. THOMAS B. FUTCHER (Tor., '93), who has been at Johns Hopkins Hospital, Baltimore, for nearly a year, visited Toronto recently. He is likely to remain in Baltimore for another year.

DR. H. CRAWFORD SCADDING went for a trip to England in April. He will be married, June 5th, and will return with his bride to his home in Toronto in the latter part of the same month.

THE following were appointed on the house staff of the Toronto General Hospital: Drs. T. McCrae, A. A. Small, J. Sheehan, and W. J. Chapman (Toronto); Drs. F. C. Harris, J. G. Lamont, A. G. Lambert, and F. L. Vaux (Trinity).

THE following is a list of the officers elected at the closing meeting of the Toronto Medical Society for the coming year: President, W. H. Oldright; first vice-president, W. J. Wilson; second vice-president, T. MacMahon; recording secretary, John N. E. Brown; corresponding secretary, A. R. Gordon; treasurer, George H. Carveth. Council: H. T. Machell, J. Spence, N. A. Powell.

OBITUARY.

MR. ARTHUR DURHAM, senior surgeon to Guy's Hospital, is dead.

PROFESSOR THOMAS HENRY HUXLEY died at Eastbourne, England, June 29, at the age of 70. He was educated as a physician, and received the degree of M.D. from the University of London, 1846. After serving for about four years as surgeon on a man-of-war he devoted himself entirely to science with distinguished success, as all the world knows. In March last he had a severe attack of influenza, followed by bronchitis and kidney complications, which were the immediate cause of death.

THE CANADIAN PRACTITIONER

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Original Communications.

PUERPERAL INSANITY*

By N. H. BEEMER, M.B.,

Medical Superintendent Asylum for the Insane, Mimico.

THE subject which the committee handed me, a few weeks ago, as a theme for a short paper, was "Puerperal Insanity." Though possibly not as interesting, from a scientific point of view, as some other forms of mental disease, from the standpoint of frequency and curability there is, perhaps, no other form of mental disease of greater general interest or practical importance.

Puerperal insanity differs in no essential respect from other forms of mental disease—that is to say, it is not itself a distinctive form, but it embraces other forms, and these several forms are classified according to the leading characteristics of the disease; the event which determines the attack provides the name of the disease, puerperal insanity, and its chief subdivisions are puerperal mania, puerperal melancholia, and puerperal delusional insanity.

*Read at the Meeting of the Ontario Medical Association, Toronto, June, 1895.

In the physical history of woman there are three crises at which periods the strain upon the nervous system is exceptionally great, namely, puberty, the puerperal state, and the menopause. If the mental constitution be unstable in any way, there must necessarily be greater probability of a breakdown at one of these crises than in the intervals between them ; and in our everyday experience we find this to be the case, for mental disease is peculiarly liable to develop in woman at one of these periods.

There are two other mental alienations occurring during the function of reproduction, namely, those of pregnancy and lactation, but those are not strictly classed as puerperal insanity.

Technically speaking, puerperal insanity is the mental disease which occurs within the first six weeks after confinement ; most of the cases occur within the first two weeks, while a few may be seen to develop after the technical limit. One of the most scientific and experienced alienists of our age finds that five per cent. of all the cases of mental diseases among women belong to this form, and that one in every four hundred labors is followed by it.

Causes. As already stated, the constitutional mental instability forms the essential groundwork and prerequisite for this and other forms of mental aberration. Most mental constitutions are inherently so sturdy that insuperable mental strain or overpowering shock will kill the body before the mind will give way ; but all are not so constructed. In some persons there is, unfortunately, though nothing to their discredit, less power of resistance in their cerebral cells ; that is to say, there is a greater susceptibility to depressing influences, and accompanying, or independent of, this condition there may also be found a diminished facility for recuperation, or even lessened cell nutrition. It is easy to see how such a person, when subject to the unusual functional activity succeeding childbirth, or the shame of illegitimate motherhood, or the concurrent lessened supply of nutrition and defective assimilation, or imperfect metabolism—I say, it is easy to understand how a mental constitution at other times in good working order may be, by such causes, at least temporarily disturbed. Given, then, a mental constitution with inherent defective resistive power of the cerebral cells, and we shall find that all influences which attack and sap the stores of physical vitality will, in the puerperal state, operate towards the development of puerperal insanity.

This disease is twice as frequent when the children are born out of wedlock, because of the attending shame and humiliation, and also because of the insufficient care and nursing received by mothers in such circumstances. Shock, resulting upon the receipt of bad news, will sometimes usher in an attack ; want of care and proper food, and having to get out of bed too early, are often contributing causes. About one-third of

all the cases are those who have become mothers for the first time ; prolonged or instrumental labor and post-partum hæmorrhages are also occasional causes. But, while each of these circumstances may appear to be the determining cause, the puerperal condition itself is alone the well-prepared foundation for the development of this disease. We have all, probably, seen toxæmia the cause of mental disease independently of the puerperal state, and if, under less suggestive circumstances, it should rank as a cause, how much more probable is it that many cases of puerperal mental disease may be properly ascribed to it.

I spoke, a little while ago, of the imperfectly-equipped mental constitution as the groundwork of all mental disease, so that an unusual strain like that attending the puerperal state would cause a breakdown. Let me ask you to go with me a little further in this direction, and let us consider if the strain incident to the puerperal state is all directed upon the nervous system. I think you will agree with me that it is not. If the inherent nerve-force of the cerebro-spinal system becomes somewhat exhausted from the strain of the reproductive function, it must surely follow that the functions of the digestive and eliminative organs will become likewise impaired, if from nothing but defective nervous supply. The diversion of the nervous supply current to the mammæ for the establishment of their function would also serve to diminish the supply current to the assimilative and eliminative organs. If, then, we have diminished nerve force to the organs of assimilation and elimination, not only because of exhausted central nerve cells, but also because that impaired current coming from the exhausted centres is diverted to a new functional development, shall we not surely have both defective assimilation and imperfect elimination? Another incidental and suggestive fact in the clinical history also points to this conclusion, namely, that about eighty per cent. of the puerperal cases occur within the first fortnight after accouchement. If the naturally sensitive cerebral cells can resist the effects of the elements circulating in the blood as the result of impaired assimilation and elimination, for the first two or three weeks after confinement, or until those functions are again established, the danger is practically over. And just here is a practical point in the prevention, rather than the treatment, of puerperal insanity. If the attending physician have knowledge of the unstable character of the nervous system of his patient, and if the labor be instrumental, or greatly prolonged, or succeeded by post-partum hæmorrhages, it would be incumbent on him to see that his patient should be guarded from all other subsequent exhausting or annoying circumstances for a longer period than the conventional week after confinement.

There is perhaps no other circumstance in domestic life so appalling and dramatic as the conversion of the joyous season succeeding the ad-

vent of the firstborn into a season of woe and misery ; there is a romantic anticipation surrounding the child-bed of the new mother, and the hopes alike of both gladdened parents are centred in their little offspring. When, therefore, the mother-love is not only lost but reversed, and when she not only "forgets her suckling child," but tries to strangle it, the dismay and sorrow and disappointment of the heartbroken father and other friends cannot be portrayed. It is impossible in words to give a true clinical picture of this powerfully affecting scene, but the more common clinical symptoms are the following : Generally the onset of the disease is sudden ; the patient does not sleep, but does not show the want of rest ; she does not take food, yet she has no hunger ; she will not converse, but is dull and apathetic, and seems preoccupied ; her joyous, happy condition of a few days previous passes away, and she appears to be absorbed by some subject to which she gives no expression. The product of her love becomes the object of her hatred, and her husband, and perhaps her doctor, become her worst enemies ; she thinks her food is poisoned and refuses it ; she thinks there is some one in the house or under her bed or at her window at night who has enmity in his breast and desires her destruction ; while she will fly from her imaginary pursuer's wrath, she may use the first instrument within her reach to accomplish her own self-destruction. She may fear that her child, if allowed to grow to maturity, will be wicked and abandoned, and to prevent this she will attempt, and sometimes succeed, in destroying it. Soon, if the attack be maniacal, she begins to chatter and talk to everybody, or to herself, and without reference to coherence of subject or comment ; she exhibits no care for her own conduct or her own body, and she is quite insensible to the interest and solicitude of those about her. There is now no ground for the least experienced observer to doubt about her condition ; the change is sharp and sudden, and it sometimes apparently occupies no longer in point of time than the change from daylight to dark.

Having sketched in a hurried way the more prominent causes and symptoms of puerperal insanity, let us now give a little consideration to its treatment. As puerperal insanity under favorable circumstances is so often curable, it is also above all other forms the one to which prompt and decisive measures should be addressed. An examination of the causes of the disease will convince us that defective nutrition underlies many of the cases, and experience has abundantly proved that judiciously administered nourishment is the physical salvation of the woman. She must be fed, nourished, whether she agrees to it or not ; if she be properly nourished, she will likely live and recover her mental soundness ; but if the depraved nutrition of the cerebral cells be not overcome she will die, or suffer chronic mental disease, which is not very different. How to nourish a patient is a

problem which every physician has to face every day, and the various answers which he will give to the problem at different periods of his life are almost amusing. At one time he will think he is sure that good results follow the administration of the various preparations of Maltine; then at another season he will feel sure that cod-liver oil and its compounds offer the most available nutritive elements; then perhaps the syrup of hypophosphites may become his sheet anchor in the process of nutrition, while it, in turn, may be succeeded by liquid foods of beef and iron and peptonoids. Doubtless all these and other pharmaceutical nutritives are of much value in their appropriate places, but for the ordinary everyday work of the nation, for the nourishment of men and women who do the work of the world, food which is prepared by the housewife or the cook in the kitchen has been found to answer all the requirements. To come to particulars, milk and eggs and meats and vegetables and fruits contain the nourishment most available and most needed by the patient; hot milk regularly administered is of the greatest value; custards rich with eggs, and egg-nog, and meats minced and broiled, are all generally assimilable, though not invariably suitable to every case. As soon as the bodily strength will permit it, occupation of some sort should be found for the patient; and just here there are two facts to be borne in mind, namely, that the muscle cells may not be impoverished to the same extent as the cerebral cells, because the elemental combinations which the muscle cells select from the blood stream for further nutrition are not necessarily the same as those selected by the cerebral cells for their own nutrition. I mean to say that cerebral-cell exhaustion is possible without extreme co-existing muscle-cell exhaustion, not only from unequal expenditure of cerebral-cell force, but from unequal and insufficient supply of nourishing elements to those brain cells; consequently physical exercise and employment may be of the greatest consequence to the patient. The other thing to bear in mind about employment is that if some of the cerebral cells in the motor tract are evolving motor energy, as evidenced by the dancing, rapid walking, gesticulations, and tearing of clothing by the patient, it is much better for the patient that this energy should be directed in its expression into some useful avenue rather than to allow it to expend itself in destructive habits, or to imprison it by means of mechanical restraint, and thus permanently damage the cells.

Nerve depressants, otherwise called hypnotics, had better be entirely discarded than injudiciously employed; indeed, when the patient recovers under their use, it is rather in spite of them than because of them. The temptation to use hypnotics is great, and often considered pressing; after natural sleep the patient is stronger and the cerebral cells are better nourished; the feeling of both physician and friends commonly is that, if sleep

can be induced by therapeutic agents, the patient's condition will be like that after natural sleep. But what is really the physiology of therapeutic sleep? Is not the consciousness of the individual hushed because the cerebral cells are rendered unresponsive by the absorption of the therapeutic agent? Does it seem reasonable that the cerebral cell, rendered insensible by the hypnotic, is in a favorable condition to receive nourishment from the already impoverished blood stream, which has also been loaded with the hypnotic? How much more scientific would it be to induce sleep by feeding the cerebral cell through frequent administration of nourishment to the patient? First of all, then, among the measures for the patient's restoration, comes nourishment, and after it come bathing, massage, and employment, and all these can best be secured through the aid of a trained nurse. I believe every case of puerperal insanity should have the advantage of the services of a trained nurse from the first day of the disease. If this important measure be neglected or postponed till the second day it may be too late, for the patient meantime may take her own or child's life. The trained nurse is of value in another way than the advantage of her professional services; her presence gives the friends assurance that the patient will be properly cared for, and saves the patient the annoyance and irritation of having her loved ones, whom she now hates, constantly in attendance upon her. Many of the puerperal cases may be advantageously treated at home, but great care must be exercised not only that ample nutrition is attended to, but also to make sure that the patient does not inflict some injury upon herself or upon her child. The patient may recover gradually or rapidly; perhaps 50 per cent. recover in three months, and 85 or 90 per cent. of those who do recover do so within six months; occasionally recoveries take place after a much longer duration.

I believe one of the first questions which the regular medical adviser strives to answer in these cases is whether his patient shall be treated at home or sent to a hospital for insane. Nine physicians out of ten desire the counsel of some one who has had a large experience in mental diseases to direct them on this question, and just here I crave your indulgence if I give respectful expression to the emphatic protests which I have so often heard against the unwisdom of our Ontario laws in regard to this subject. The government—I mean the people of Ontario—generously and humanely declare that the insane and idiotic, when not possessed of property, shall be maintained at the public expense, and the government wisely appoints medical men to conduct our asylums for these disabled men and women. The government requires its superintendents and medical officers to be properly equipped for the scientific management and treatment of all forms of mental diseases, and their opportunities for observation and research in the large institutions should qualify them to speak with some

degree of definiteness about the management of the acute cases. It would be natural to suppose that, if the attending physician of any private patient suffering from mental disease desired the counsel of a medical superintendent or medical officer of an asylum, it could be readily obtained, but this is not the case ; the men who have been so exceptionally placed by the government to acquire an intimate and practical knowledge of mental diseases are required by that government to decline to give counsel to the attending physician who is in search of it, on the ground that the asylum officer might interfere with private interests. Asylum superintendents are repeatedly asked by the attending physicians in cases of mental disease to meet them at the bedside of the patients and advise whether home or hospital treatment should be pursued ; on the answer to this question may depend the recovery or non-recovery of the patient. In every other department of medical science the family physician may command the services of the specialist, but in this department, where there is the greatest need, that privilege is denied him. I am not pleading the cause of the medical officers, though I believe consultation with outside practitioners in mental cases would benefit them greatly, not only by forcing them to keep well read in the recent literature of mental diseases, but also by enabling them to observe the initial symptoms of mental diseases which exhibit themselves before the patients have been transferred to the asylums. Neither am I specially called upon to plead the cause of the attending physicians in these cases, though their position is one of unnecessary hardship. But I am pleading in the interest of the newly-diseased mind of the woman who cannot plead for herself, and who, if granted access to the services of the specialist in the early stages of the disease, may sometimes escape the odium which wrongly attaches to an asylum residence. On the other hand, sometimes recovery would follow the speedy removal to the hospital for insane, whereas the more delayed removal would result in another additional patient being placed for life as a ward in the government hospital. It would seem, therefore, that there would be a fourfold advantage arising from such consultations, if they were allowed, namely, a professional advantage to the medical officers ; an unquestioned satisfaction to the attending family physicians ; a pecuniary saving to the government ; and, what is of greater consequence than all the rest, the patient herself would have all the advantage which the study, devotion, and experience of the alienist could give her.

MODERN EXPERIMENTAL SURGERY ON MAN AND WOMAN.*

A CRITICISM OF OPERATIONS DONE AND THE RESULTS OBTAINED.

By J. F. W. ROSS, M.D. TOR.,

Lecturer in Gynæcology in the Woman's Medical College; Gynæcologist to St. John's Hospital, Toronto General Hospital, and St. Michael's Hospital.

ONE who criticizes is open to criticism; his intentions should be honest and his criticisms free from all feelings of personal animosity. My criticisms of the surgery of the present day, or, at least, of that branch of it with which I am most intimately associated, are the result of personal convictions. My views may change, but these are the views that I hold at the present time.

Owing to the great strides that surgery has made since Lister introduced his antiseptic theories, much of the surgery of the past fifteen years has been, to a certain extent, experimental in its nature. All that has been experimental can be looked back upon and reviewed in order that any mistakes may be corrected.

Owing to the former great mortality accompanying surgical procedures, many operations that should have been done were left undone, and, with our present knowledge, we criticize the surgeon of the past, and consider that he failed to save life by neglecting to perform an operation that, to us in our present light, appears trivial. With equally as good reason, the surgeon of the past might, were he to rise from the tomb, criticize the operator of the present, and tell him that, in his opinion, he performs unnecessary and useless operations. We are enabled to do so much with so little danger that we are apt to forget where we should stop.

Many new surgical procedures will be introduced year after year, but there are few of them that will stand the greatest test of all, the test of time. To the generations yet unborn many of these operations will be forgotten and ignored, just as we ignore many of the procedures of the past. Mr. Smith turns a stitch to the left instead of to the right, and the operation becomes Smith's hernia operation. Mr. Jones stitches from

*Read before the Ontario Medical Association, Toronto, June, 1895.

below upwards instead of from above downwards, and the birth of Mr. Jones' latest operation is complete, heralded about from town to town by the pages of the medical journals, another immature nursling to confound the already overburdened medical student. The dead heroes of our surgical past were brainy men, endowed with common sense, great thinkers; but, perhaps, more modest than some of the operators of the present day, they performed these operations with a stitch up and a stitch down, but forgot to mention the fact, as they thought it was only the outcome of the exercise of a little common sense. It is wise that surgical procedures that are *bona fide* departures should bear the name of the surgeon introducing them, but it is little short of surgical piracy to add some slight addition to a surgical operation and add the name of each of those making such petty additions to the name of the originator of the operation. After a time the name of the original thinker, of the one who first brought the operation to the notice of the profession, is entirely lost.

With the development of our country small hospitals have been built in many of the towns, and much good surgical work is being done in these hospitals. There is a large amount of trashy literature circulated among the members of the profession, and this literature, unfortunately, influences those who read it, to a certain extent. With a hospital in which to operate, with a diminished mortality incident to the adoption of aseptic surgery, and with trashy literature to recommend unwise operations, there is a danger that surgery may do too much. Unless one is behind the scenes and knows something of the standing of a writer in his own community, he is liable to accept much that emanates from his pen as true, and the outcome of a large experience, whereas the information of the would-be authority is in reality culled from books and his own imagination. Many of the deductions found in papers printed cannot be relied upon, but of course the journals cannot be held responsible for this fact. Frequently a superstructure is built without a foundation, or, if there is a foundation, it is entirely in the imagination of the writer.

For instance, a writer details fifty or one hundred cases of pelvic inflammation successfully treated by the use of electricity. All of these cases, after waiting for a certain interval of time, recovered; in the interval electricity was used. We know that many such cases will improve, and that many will entirely recover if left alone, and when they are not treated by electricity. But as electricity was used in the fifty or one hundred cases above referred to, and as the cases recovered, therefore the electricity produced the result.

Another professional brother proceeds at once to spay such cases, to remove inflamed tubes and ovaries, and the patients rapidly recover; they have no more pelvic peritonitis, they are soon in robust health, but,

nevertheless, unsexed and unable to further propagate their species. Such an operator is, no doubt, honest in his intentions, and convinced that, because now and then one of these cases will take on a malignant form of inflammation and die, therefore operation is required in all cases in order to save life. The old-fashioned gray-haired family physician could, no doubt, teach both of these professional brethren a lesson. He could relate case after case of pelvic inflammation following labor or miscarriage, with high temperature, rapid pulse, tympanitic abdomen, in which perfect recovery took place after rest in bed, purgation, or, on the other hand, the use of opium. He would prevent these gentlemen from treating with electricity or the knife cases of ovarian neuralgia in young unmarried girls; a neuralgia resulting from anæmia, resulting from overwork, resulting from mental fatigue, resulting from onanism, resulting from blighted hopes and disappointed affections; he would prevent the use of the knife for the relief of women with pelvic pains of indefinite character, women with large families, overwrought in body and mind; he would prevent the use of the knife in many other cases in which pelvic disease is simulated. A little chloroform and a well-practised finger should prevent mutilation in these cases. As the superintendent of a lunatic asylum once said to me, "Some of these women have from the first one foot over the threshold of a lunatic asylum." One operator takes out one ovary, another operator takes out the other, and then a third considers it necessary that the uterus should be removed—that, in fact, it should never have been left behind. And after all these operations have been performed the patient eventually shows pronounced symptoms of insanity, and the seat of the disease is found to be in the central nervous system.

Even where pelvic inflammation has occurred and adhesions have formed, the patient may for years enjoy the best of health. If an abscess forms in the ovary, or if pus collects in the tube, coeliotomy is demanded. In such cases the gray-haired practitioner is entirely beyond his depth, and were we to follow him he would lead us into serious error; he would have us avoid the knife when it should be used, he would have us allow such patients to suffer for years when they should be relieved by a surgical operation.

To guide the modern young woman, I would employ the old-fashioned practitioner and the common-sense mother. By them pelvic massage, one of the most revolting of modern medical procedures, would be at once tabooed. The uterus and ovaries would be kept in the pelvis, and would not be permitted to migrate to the brain. Our young women would not be permitted to cross the Atlantic to enter institutions for the treatment of imaginary womb troubles. These transatlantic institutions exist, and are filled with American girls who receive the pelvic massage treatment at

regular intervals. It is amazing that such a procedure should have taken hold of the minds of an intelligent profession. When such institutions exist many young women, under the guise of ill-health, are enabled to live in the indolence that appears to suit their tastes. When carefully watched by intelligent nurses their pains disappear, and the consensus of opinion of their own sex is that their ailments are imaginary, and that they only suffer when the doctor is around. These patients almost insist that their ovaries must be removed, and with the introduction of the new dogma, after the ovaries have been removed, they will perhaps return and insist that the uterus must be taken away, as it has now become the fashionable offending organ. If the bladder and rectum were also removed, and they lived, they would still remain uncured, they would still live on the same indolent life, they would still take their morphine, and remain an incubus to their long-suffering friends. One of my house surgeons recently humorously remarked, regarding a certain case, that the patient required rather a trephining of the skull than a *cœliotomy* for the removal of her ovaries.

These hysterical women will allow themselves to be mutilated without offering a single complaint. In one day I performed *cœliotomy* on two cases. I was anxious to satisfy myself upon the very point I am at present discussing. I drew up the ovaries, found them free from adhesions, found them healthy in character, found the Fallopian tubes affected with no disease, and dropped the organs back again into the pelvis. Each patient expressed herself as free from all her old pains within twenty-four hours after the operation. One patient was not made acquainted with the fact that her ovaries had not been removed, and she soon became pregnant, much to her disgust. Her symptoms have now developed in a new direction; she is suffering from excessive uterine hæmorrhage. This hæmorrhage only occurs when she is out of the hospital; the nurses are unable to find any trace of it when she is admitted for treatment.

In connection with the ovary there is much that requires careful study. From my own experience, I find that a woman will continue to menstruate with one ovary and with both Fallopian tubes removed. From my own experience, I find that a large percentage of fibroid tumors diminish in size, to a marked degree, if they do not totally disappear, after the removal of the ovaries and tubes. Whether the removal of the ovaries alone would be sufficient to produce this result or not, I cannot say. I have seen tumors extending above the umbilicus almost entirely disappear after this surgical procedure has been carried out. Many abdominal surgeons have come to the conclusion that if a small portion of ovarian tissue is left behind menstruation is liable to continue. It is a well-known fact among farmers that, if during the performance of the operation of castration a large portion of the cord is left intact, subsequent engorgement of

the corpora cavernosa and coitus are possible, and, further, that the animal retains more of its resemblance to the entire male. From this, I think we learn that the operation of oophorectomy for fibroids should be a very thorough one, that no ovarian tissue should be left behind.

From the fact that this operation is so successful in causing the disappearance of these tumors, the surgeon should hesitate before he decides to perform hysterectomy. On one occasion I drew up a fibroid tumor growing from the left broad ligament, intending to remove it, but, after inspecting its attachments, I found that its removal would be accompanied by the greatest possible danger to life, from the fact that it was growing between the leaves of the broad ligament into the pelvis. I, therefore, removed both ovaries and tubes and replaced the tumor in the abdomen. It was impossible to repack it into the pelvis, but, notwithstanding this fact, the patient made an excellent recovery. Within twelve months, this tumor has diminished to one-third its original size. Menstruation has all but ceased.

Vaginal hysterectomy for small fibroids is, in my opinion, an uncalled-for procedure until after oophorectomy has been performed. In a very occasional case hæmorrhage may continue, and the operation of hysterectomy may be indicated. No woman can suffer a total extirpation of the uterus without undergoing a serious mutilation; this mutilation is a more severe one than that caused by the performance of the operation of oophorectomy. I am performing more oophorectomies and fewer hysterectomies than formerly. If all women suffering from fibroid tumors would submit themselves early to the operation of oophorectomy, large fibroids, that a few years ago were so common, would become very scarce, and an immense amount of suffering would be avoided.

For cancer of the body of the uterus, vaginal hysterectomy is called for at the earliest possible moment. In cancer of the cervix uteri, only one of two surgical procedures should be carried out, either high amputation of the cervix or vaginal hysterectomy. Neither of these operations should be performed if the vaginal wall and the vaginal lymphatics have become involved. With this involvement recurrence of the growth will be rapid, and the woman, while running great risk of her life, gains but a short respite from death. Where no such invasion has occurred, and these are the cases that rarely come under our observation, the woman runs the risk of her life, but gains a great respite from death. The use of the curette and of caustics may produce a certain amount of mental calm by causing the patient to believe that something is being done to alleviate her suffering and prolong her life.

The operation of hysterorrhaphy is one that I have never yet performed. To my mind, it is a useless operation and quite uncalled for. On one occa-

sion I pinned the cornu of the uterus into the anterior abdominal wound to keep a retroflexed uterus out of the cul-de-sac of Douglas. The symptoms were not relieved; the patient still complains of her old aches and pains.

It is a well-known fact that after a supravaginal amputation of the uterus for fibroid tumor a pedicle is left fastened in the lower angle of the wound. This gradually disappears, until it finally leaves a granulating pouch that heals from the bottom. The remnant of the cervix and skin are thus intimately united in a firm scar. No sooner has the clamp been removed than the stump of the cervix begins to drop back into the pelvis. In a few months the stump of the cervix has become separated from the skin and the scar has become stretched. In a couple of years the cervix will be found to have resumed its old position in the pelvis. How, then, can we hope to hold the fundus uteri against the anterior abdominal wall by means of a few adhesions? If a permanent stitch be placed and left imbedded in the tissues, it becomes a menace if pregnancy occurs. If the stitch is cut, the woman will, in all probability, miscarry; if the stitch is not cut, the woman will, in all probability, miscarry. The operation of hysterorrhaphy is not an ideal one, and I do not believe that it is an operation that has come to stay. It may be performed for a time by a few, but will not be performed by the large mass of conservative gynecologists.

The same criticism may be offered regarding Alexander's operation (shortening the round ligaments). The same criticism may be offered regarding the operation of nephrorrhaphy; I consider it a useless surgical procedure, and I have never yet cured a patient on whom I have performed the operation. Movable kidney is a very common affection. A movable kidney in a neurotic woman may be stitched to the side, but the nerve symptoms will still remain. Some operators claim that the kidney remains in position; in the cases on which I have performed the operation, the kidney has again become movable. I fail to understand why a few adhesions should remain unstretched after the performance of this particular operation. Other operators have found this drawback to the operation, or they would not have suggested the use of the buried sutures. I would allow no surgeon to place a buried suture in either of my kidneys for the purpose of keeping it immobile. The right kidney can be palpated in its entirety in a large majority of moderately fleshy women who have borne children. In these women the lower end of the left kidney can be felt. I frequently find the kidneys quite mobile in young men. The symptoms attributed to movable kidney will frequently be found, on closer inspection, to have some other origin.

Nephrectomy bears to nephrotomy the same relation that hysterectomy for fibroid tumors bears to oophorectomy. Nephrotomy should be tried

in a large number of cases before nephrectomy is resorted to. In one case I even controlled severe hæmorrhage, after splitting down the kidney for the purpose of removing an impacted calculus, by means of forceps pressure, and thus avoided the performance of the more serious operation of nephrectomy. Four or five pair of forceps were left protruding from the wound for a period of thirty-six hours. The shock of nephrotomy is not nearly so great as the shock following nephrectomy.

Of late a surgical tidal wave has been flowing in, carrying on its crest several new procedures. The intestines have been attacked with vigor. Cancer of the pyloric end of the stomach, that a few years ago was deemed incurable, has become an object of attention. Anastomosis between the stomach and the duodenum has been performed; the pyloric cancer, in other cases, has been removed. When a patient has become affected with cancer of the stomach, his death sentence has been passed. Owing to the fact that the stomach plays an important part in the process of digestion, patients suffering from a gastric growth become rapidly emaciated. An emaciated and half-starved patient ill withstands the shock of any serious operation. Anastomosis of the stomach with the intestines in such a case is, at best, but a miserable makeshift, when the patient is suffering from cancerous disease of the pyloric end of the stomach. I have refused time and time again to perform this operation. The introduction of various mechanical devices by which the operation is rendered easy has not altered my opinion regarding the matter. To anastomose the stomach with the intestines and leave the cancer behind can only add but a little while to the patient's life, and the removal of the cancer itself, if the patient should be fortunate enough to recover from the shock of such a serious operation, gives but a very short interval of freedom from recurrence.

Operations for removal of cancer of the rectum above the reach of the finger should be placed in the same category. Cancer of the rectum is a disease that usually occurs in elderly people; the lymphatics of the rectum are very abundant, and this portion of the bowel has large glands lying in its immediate neighborhood. These lymphatics are very early affected, and the removal of the cancerous rectum does not remove the cancerous disease. The operation of intestinal anastomosis and removal of a cancerous rectum on an elderly and emaciated patient is a very severe one, and, if successful, it will only prolong life for a short time. On this account, I have refused to perform the operation.

Intestinal anastomosis for a non-malignant stricture, fæcal fistula, intussusception is an operation that will prolong the life of a patient to an indefinite length of time. The mechanical appliances lately introduced as an aid to the surgeon are worthy of the highest praise, but, owing to the facility with which anastomosis can now be accomplished, I fear that anastomosis will be produced in cases that would be better off if left alone.

The operation of removal of the breast is one that is unaccompanied by danger to life. If a patient is suffering from cancer of the breast, and the lymphatics and skin of the axilla are seriously involved, I frequently refuse to operate, feeling that there is but little to be gained by operation. If this be so in an operation in which the mortality is *nil*, how much more does it apply in cases in which the mortality of the operation is much greater, and in which the chances of subsequent eradication of the disease are diminished !

It is but a few years since pelvic cellulitis became transformed into pelvic peritonitis, salpingitis, and ovaritis. But a few years since the knife was called upon, and pus tubes and pus ovaries were enucleated and removed. As the operation for removal of pus from the pelvis became popularized, surgeons became imbued with the idea that operation presented the quickest means of effecting a cure in cases of pelvic inflammation, and not only in cases of pelvic inflammation, but in cases of pelvic irritation.

Of late another wave has washed the sands of surgical research, and has left behind it a few grains of sand. The sand may glitter and sparkle in the sunshine, but will soon be washed out to sea. I refer to the operation of vaginal hysterectomy, when performed for the relief of pus tubes. It has been stated that a woman who has pus tubes has also a septicallly infected uterus, and that to cure her the uterus must be removed. Women who have been spayed in times past are now being submitted to a second operation by a certain section of the modern school. Having operated on nearly one hundred cases of pus tubes, and having met with bowel adhesion and bowel perforation in many cases, I cannot understand how it is possible to complete such operations in a satisfactory and scientific manner through the vagina. That adherent ovaries and tubes and adherent uterus can be readily removed by the vagina, I will admit ; and, further, that it is easier to remove healthy ovaries and tubes and uterus through the vagina than through an abdominal opening. The operation can be performed with the greatest of ease, but I must deny that it is possible to remove large pus tubes and ovaries that have perforated into the small intestine, the bladder, and the rectum, through the vagina with anything like the degree of safety that they can be removed through the anterior abdominal wall. It would be just as sensible to take out every kidney that is affected with a stone impacted in a small abscess cavity as to take out the uterus when the ovaries and tubes are the organs affected. *If so-called gynecological surgery becomes a little more aggressive, the general practitioners will begin once more to become their own gynecologists ; they will be afraid to recommend a consultation with a specialist.*

Within the last few years the appendix vermiformis has taken up a good deal of the attention of the profession. The public has become

alarmed, and every attack of colic means an attack of appendicitis in their eyes. They have become so impressed with the necessity of early operation, as represented to them by the profession, that it is sometimes difficult to persuade them that an operation is not required. A few deaths of prominent men have taken place subsequent to the operation for the removal of this appendage, and there has been a partial revulsion of feeling. *The physicians have begun to think that the surgeons have gone too far.* The lay press has ruffled its feathers over the matter. Some have preached the doctrine that, if symptoms of appendicitis occur, you should operate at once; this is altogether too sweeping. The surgeon only sees the bad cases, and bases his opinion on these cases. The physician sees a large number of the milder cases that never come under the surgeon's observation. Each case must be judged on its own merits, and it is therefore unwise to send out broadcast over the country an opinion that such radical measures are required. Many cases of inflammation of the appendix occur and abscess forms, and is either opened externally or cures itself by perforation into the bowel. When abscess has formed, the knife should be used. In the early stage of the disease, when the bowels are distended, pulse rapid, temperature high, operation, to my mind, does more harm than good. In these fulminating cases, the increased shock of operation will turn the balance the wrong way. The cases in which operation is called for in the interval between the attacks are rare, when we take into consideration the number of patients who, at some period of life, have suffered from an attack of this disease. Nature indicates to us the cases in which operation should be performed in the interval between the attacks. The temperature will remain elevated, the attacks will recur at frequent intervals, the general health will suffer, and when the operation is performed a small pocket of pus, holding from a teaspoonful to a table-spoonful, will be discovered.

In my early cases I was anxious to remove the appendix, but at present I leave it alone, if there is danger of breaking down adhesions during the search for it. I am satisfied to drain the abscess cavity for the time being in such cases. After an attack, I have seen the tip of the appendix entirely severed from the remainder, with new adhesions and a new blood supply, and the base sealed over, and as entirely obliterated as if its obliteration had been the result of the surgeon's ligature. Such a case is, of course, self-cured. One attack of appendicitis, from which there has been perfect recovery, is not sufficient indication for the subsequent performance of a surgical operation. It has even been suggested (whether in earnest or not, I do not know) that each infant should be subjected to coeliotomy for the purpose of having its appendix removed. *The present generation seems as anxious to invade the peritoneum as the former generations were to avoid it.*

Men and women may suffer from gallstones for years, and may require no operation. The results of these operations are very satisfactory. In some cases operation is urgently demanded. Unless operation is urgently demanded, it should not be forced upon the patients; they should be called upon to choose for themselves. If they desire relief by means of the knife, such relief should be granted.

I feel satisfied that within the next ten years the waters of the great surgical flood that has swept over this continent and the continent of Europe will fall and regain their normal level. An abatement of the flood cannot come too soon.

481 SHERBOURNE STREET, TORONTO.

FLAT-FOOT.*

BY B. E. MCKENZIE, B.A., M.D.,

Lecturer on Orthopaedics and on Surgical Anatomy in the Woman's Medical College, and Surgeon to the Victoria Hospital for Sick Children, Toronto.

THE term "flat-foot" is not a happy one, as it does not correctly describe the conditions commonly referred to under this designation. Having reference to all departures from the normal conformation of the foot, that which will be described in this paper may be said to be always a weak foot. On the other hand, however, it is not proposed to discuss all varieties of weak feet.

In order to judge rightly concerning the various abnormal shapes and conditions in which the foot may be found, and its numerous deficiencies of action, a familiar acquaintance and intimate knowledge of its normal architecture¹ and a thorough understanding of its proper functions are essential. When compared with the hand, it is observed that the latter is intended for acts of manipulation and dexterity, as seen in the short carpus and long phalanges, permitting a wide range of independent motion to each finger; while the foot is primarily adapted for weight-bearing under such circumstances as presuppose the power to move the superincumbent weight easily and without concussion, as seen in the longer arched tarsus and short, strong digits fitted on their under-surface to apply themselves intimately to the surface tread upon.

The bones, ligaments, and muscles of the foot are so arranged and related as to form two sets of arches, a longitudinal and a transverse. The piers of the former consist of the tubercles of the os calcis behind, and the distal ends of the metatarsal bones in front. The latter is more correctly described as a half arch, its outer pier, consisting of the cuboid and fifth metatarsal, receiving a good support by an approximate contact with the ground, while the inner pier receives only the support afforded by the inner portion of the longitudinal arch. Thus the transverse arch of one foot is the complement of that of the other. The internal division of the longitudinal arch consists of the posterior two-thirds of the calcaneum, the scaphoid and cuneiform bones, and the three inner metatarsals; the outer

*Read before the Toronto Medical Society.

division is formed by the calcaneum in its whole length, the cuboid, and the fourth and fifth metatarsals. The inner portion bears the greater part of the weight of the body which is transmitted through the astragalus which overhangs the sustentaculum tali, and so inclines inward from the calcaneum that its external superior border is directly over the middle of the calcaneum.

In walking, the weight of the body transmitted through the astragalus, as the keystone of the combined arches, falls upon the feet alternately, not directly downward, but with an impact downward and outward, the direction of the force as the weight comes upon the right foot being downward and to the right, while in stepping upon the other foot there is an element of force moving to the left as well as downward. The transverse arch, being well supported in its outer piers, is well calculated to withstand this outward impact as the feet are called upon to bear alternately the weight of the body.

The arches are supported in normal degree of curvature by muscles and ligaments chiefly, the bones being but little shaped to attain that purpose. The outer portion of the longitudinal arch is reckoned by Lorenz to be a little more than five and a half inches between piers, and its highest point in a good ligamentous preparation to be three-fourths of an inch from the ground. The inner portion has nearly the same span, but is much higher.

The most important ligaments concerned in the prevention of excessive flattening of the arch are the inferior calcaneo-scaphoid, the two plantar calcaneo-cuboid ligaments, and the various slips of the tendon of the tibialis posticus, as they pass to find attachment to the different tarsal and metatarsal bones. The plantar fascia also forms a powerful "tie-beam" connecting the piers of the plantar arch. The highest point of the arch corresponds to the joint between the astragalus and scaphoid; it is also the weakest part, and its chief supporting ligament, the calcaneo-scaphoid, is composed chiefly of elastic fibres, which allow the arch to yield slightly, enabling it to withstand the effect of shocks, and contributing to the springy action of the foot, so necessary to activity.

In standing, the weight of the body is received chiefly upon that part of the arch extending from the heel to the great toe, while the outer end of the transverse arch comes to the ground at a part external to a line passing through the internal pillars of the longitudinal arch. Thus the weight of the body is transmitted to a tripod in such a manner that its greater part is supported by the two inner feet. The three points of contact of this tripod with the ground are at the tubercles of the os calcis and the heads of the first and fifth metatarsal bones. In order to maintain proper stability in the foot, it is necessary that the line of transmission of the body's weight should come to the ground somewhere within the triangle

formed by joining the feet of the tripod ; otherwise there is a tendency to turn over to that side which receives the weight.

In a foot normally adjusted, this tendency to roll over toward the inner border is prevented by the action of four muscles especially—the tibialis posticus, the flexor longus digitorum, the flexor longus hallucis, and the tibialis anticus, three of which pass behind the inner malleolus as over a pulley to their insertion. The muscles which afford most support to the arch are the two peronei at the outer side, and the two tibiales on the inner side, some support being given also by the long flexors of the toes.

Flat-foot² is a deformity characterized by a marked pronation of the foot with obliteration of its arch. There is also abduction of the front part of the foot, and partial dislocation of the bones at the mid-tarsal joint.



Fig. 1. Congenital Flat-Foot.

The less marked cases are generally disregarded, but when the structures at the inner margin of the foot are placed constantly in a condition of strain, and those on the outer side are crowded together, there is often much pain, especially after standing or walking.

When it is remembered that the weight of the body is normally transmitted to the earth in such a manner as to fall more upon the inner portion of the foot, tending to produce pronation, it will be seen that abduction increases this tendency, and is a position of weakness, while adduction moves the points of support more directly under the weight of the body, and is a position of strength. Adduction implies muscular activity, the ligaments being then well supported, and the foot well under muscular control, while in abduction the ligaments are left to bear most of the weight.

The turning outward of the foot in walking or standing produces greater strain upon the arch, while the in-turning of the foot affords it greater protection. It is characteristic of the walk of those who have weak or flat feet that they roll over on the foot in walking, rather than rise upon the anterior portion of the foot, as do those who have a graceful and elastic gait.

The more common causes of flat-foot may be easily summarized. Marked cases are seldom seen at birth (*vide* Fig. 1), but those of moderate degree are very common, especially among girls. In taking the foot in the hand in these mild cases, it will be found that the foot may be easily abducted so as to cause the axis of the anterior portion of the foot to form an obtuse angle with that of the os calcis, and three bony points are made



Fig. 2. Paralytic Flat-Foot.

to stand out with prominence at the inner margin, viz., the inner malleolus, the head of the astragalus, and the tubercle of the scaphoid.

The acquired variety is much more common (Fig. 3), but is probably to be regarded, in the majority of cases, as the development of a predisposition. Rickets, paralysis (Figs. 2 and 3), traumatism, and all forms of disease or habits of life which produce a relaxed and flabby condition of tissues, may cause weakening or breaking down of the arch. Flat-foot is a very common accompaniment of lateral curvature of the spine, and both, no doubt, are due to the same causes. In general, it may be said that flat-foot is a result of a disproportion between the body weight and the apparatus for sustaining it.³

Traumatism may occasionally be a cause of this deformity. When, after Pott's fracture, the foot is found in marked pronation owing to a defect in adjusting the fragments of the fibula, then the weight-bearing foot is moved outward, and the weight is transmitted to the ground along a line that may pass entirely inward of the points of support. Falls from a height may produce fracture of some of the bones of the tarsus or rupture ligaments, breaking down the arch.

Rational treatment must be based upon what has been shown to be the pathological anatomy of this condition. The deformity may be summarized as consisting of one or all of the following three elements, viz.,

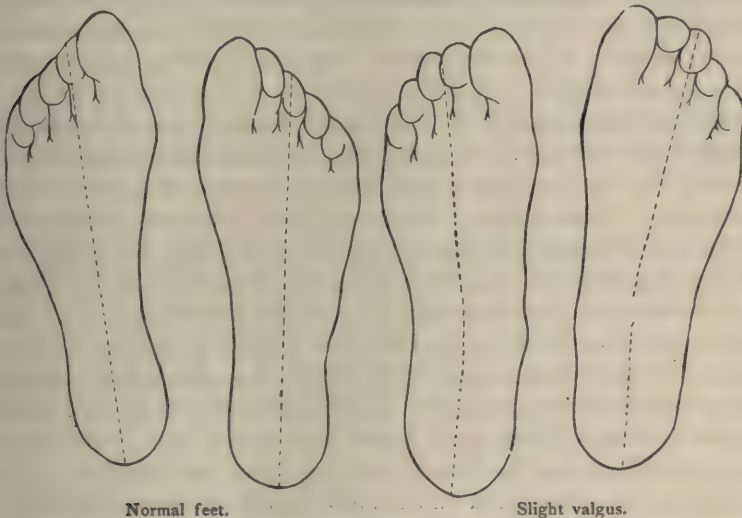


Fig. 3. Acquired Flat-Foot.

abnormal lowering of the arches, pronation, valgus. Any effort to establish a cure of the affection must aim at correcting the mechanical defect. While the arch remains broken down, and the weight of the body is permitted to fall upon the ligamentous internal and plantar supports, there cannot be the elasticity of step which is afforded by a healthy foot. Each of the other elements just named tends to exaggerate the defect in the arch, the valgus by removing outward the anterior limbs of the normal tripod of support, and pronation by removing the entire foot outside of the point at which the line of transmission of the weight of the body would reach the ground.

For the sake of presenting it tersely, the treatment may be presented under three heads.

(1) Forcible restoration of the foot to a normal position, or, rather, its over-correction. It has been pointed out that the attitude under consideration is one of weakness, whereas the opposite conditions, when present in normal degree, are positions of strength. Various methods of replacement have been employed. Ogston,⁴ of Aberdeen, has excised the head of the astragalus and procured ankylosis at the mid-tarsal joint, while at the same time he corrected the valgus by shortening the internal border, and also maintained during healing a properly elevated arch. Besides being an operation of considerable magnitude, this has the disadvantage of destroying the mid-tarsal joint, and the elasticity of the foot so greatly



dependent upon its presence and integrity. Probably the best method of replacement is with the hand or the Thomas wrench while the patient is under anæsthesia, aiding, if necessary, by tenotomy of the peronei or other obstructing bands. In this way the correction should be so greatly overdone that the position of the foot will be changed from one of valgus, pronation, and flattened arch, to one of varus, supination, and exaggerated arch. The foot now should be encased in gypsum or other retentive dressing, having first protected it by a thick layer of absorbent cotton, and it should be retained in this for three or four weeks.

(2) After removal of the plaster, the most important part of the treatment is commenced—that which may appropriately be called *developmental*.⁵ Regularly, morning and evening, the foot should have vigorous massage and voluntary exercise for a period of half an hour. The masseur

should mould the foot into a position of adduction, supination, and of increase in curvature of the arch, while, at the same time, energetic kneading and rubbing is given, especially of the parts at the inner and plantar aspects of the foot and of the calf of the leg. Also voluntary efforts should be made by the patient to place the foot to the fullest degree in the same position of adduction and supination. A number of valuable exercises may be employed while in the erect position, among which raising the heel from the ground, turning the toes strongly inwards, and walking on the outer margin of the foot are the best. The bicycle may be employed as an excellent means of development of the inner and plantar structures. The weight of the body is removed from the feet, and in using the pedal properly a regular systematic exercise may be secured for those parts whose strengthening is most desired. In ordinary walking the toes should not be directed outward, but should be placed directly forward, affording in this way muscular support to the ligamentous power which sustains the arch.

(3) Mechanical support may be employed also to aid in keeping the rectified foot in position. As in all cases when orthopædic appliances are required, simplicity in construction and employment is a strong recommendation. Various forms of unyielding plates have been recommended, and have been employed with a measure of success; but there is one standing objection to their employment, viz., that the constant pressure on the structures at the inner margin of the foot and in the plantar region tends to produce atrophy of the very parts which it is our chief object to develop. It may be accepted as a principle that there is a standpoint viewed from which the application of all splints, braces, and orthopædic supports is wrong. Their use, however, may be the only mode of treatment available, or may be the one which is least objectionable. As the employment of a support in tuberculous disease of the spine or hip is generally the best treatment, and as it is sometimes justifiable in the treatment of roto-lateral curvature of the spine, so the use of rigid plates may in certain cases be the best means to employ in the mechanical treatment of flat-foot. A much better method, however, is a modification of that employed by the late Hugh Owen Thomas, of Liverpool. The shoe ought to be so constructed as to have the sole and heel at the inner margin elevated and projected inward, in order to increase the degree of supination of the foot. By this means the points of support are placed more nearly under the line of transmitted weight, and the condition of constant strain is relieved. The boot may be still further improved by making it upon a last curved inward from the instep, *i.e.*, made to correspond to a foot held in a position of varus. At the same time the arch of the last should be high, so that the shoe may give a support to the long arch

of the foot. This shoe, when compared with that which I have recommended for employment after the correction of ordinary club-foot,⁶ will be seen to embody exactly the same principles. It aids in maintaining the rectification in each of the three chief elements which constitute flat-foot, viz., pronation by elevation at the inner margin of the sole, valgus by the curving inward at the medio-tarsal joint, and direct support of the arch.

The application of these principles of treatment will vary according to the circumstances and conditions of the patient. There can be little question that the second—the plan of developing the weakened structures—is the most important factor in correction, especially as it finds ready employment in a large class of cases who greatly need treatment, viz., youths from five or six years upward, particularly girls. In these cases very great improvement or even a cure may be effected. In those whose age and circumstances render them less suitable for this treatment more dependence must be placed upon the mechanical treatment.

A careful study of each case, the removal of preventable causes, and a patient application of rational principles of treatment will afford much relief, or will cure the great majority of a class of cases whose management hitherto has not been found generally satisfactory.

(1) Quain's Anat., 9th ed., p. 132. McClellan's Anat., vol. 11, p. 327. Dane, Boston Med. and Surg. Journ., Oct. 27, Nov. 3 and 10, 1892. Cunningham, page 331, vol. 1.

(2) Orthopædic Surgery, Bradford & Lovett, p. 227. Whitman, New York Med. Journ., Feb. 27, 1892.

(3) Whitman, New York Med. Journ., Feb. 27, 1892.

(4) Lancet, Jan. 26, 1884.

(5) Roth, New York Med. Journ., June 16, 1888.

(6) McKenzie, Transact. Amer. Orth. Assoc., vol. 5, p. 203.

HISTORY OF A CASE OF RECURRENT NASAL FIBROMA.*

BY PRICE-BROWN, M.B.,

TORONTO.

MR. PRESIDENT AND GENTLEMEN,—I must request your forbearance with me for taking up your valuable time with the report of a single case. We all know how little weight can be attached to individual histories; and that it is only by accumulated evidence that we can be guided to a proper estimate of the value of clinical research. If this is true in reference to general practice, it is equally true of the wide range of subjects pertaining to our own special field.

Still, there are lesions in which the individual histories are so few, and the few so widely spread, over time as well as territory, that it would seem to behoove every observer to chronicle each instance as it occurs, with the hope of adding a fraction, however minute, to the information already possessed. This, I am inclined to think, is true of nasal fibroma, and, as the case I have to report presents several interesting features, I trust you will bear with me while I briefly detail its history.

On November 30, 1894, Mr. A. V. P., aged 22 years, stenographer, consulted me about a growth located in the posterior half of the right nasal passage. He was a hæmophilia. Had had no specific disease. Family history good. Both parents living and healthy. No relatives, so far as he could remember, had been afflicted with malignancy or tuberculosis.

Five years ago, he discovered a somewhat hard, dark-colored growth in the right nasal passage, just within the choana. His voice at the time was nasal, and it was almost impossible to breathe through the right naris. He consulted a specialist, who snared off a piece. This produced profuse hæmorrhage, which, however, soon ceased. At different sittings during the next few weeks, the snaring operation was repeated six or seven times. Each time the bleeding was severe.

As the tumor seemed to grow almost as rapidly as it was snared away a microscopical examination was made, and the disease was pronounced

*Read before the Laryngological Section of the American Medical Association at Baltimore, May 1895.

to be sarcoma. On further consultation with general surgeons, it was advised that a portion of the right maxilla be removed and a silver plate inserted, the case being considered one of malignant disease.

This, however, his people declined to consent to, and he was sent to Boston and placed under the care of Drs. Packard and Macdonald, of the Homœopathic Hospital. He remained there two months, and during that time had several operations performed under ether. The nature of these he could not tell, except that they were intra-nasal, attended by exhausting hæmorrhages, and that the nostril, after each operation, was tightly plugged.

At the expiration of the period mentioned he was well enough to return home. The doctors told him that they had removed the whole of the tumor, with the possible exception of a little piece at the back end of the passage, upon which they did not think it advisable to operate at the time.

During the following summer he had, for months, slight daily hæmorrhages; but he spent the season in the country, and they eventually ceased. For the next three years he had so little nasal trouble that he did not think professional advice necessary. About a year ago, however, occlusion of the posterior end of the right nasal passage commenced to return; crusts would form which he found it difficult to void; and slight hæmorrhages would also sometimes occur. In November, the physician he consulted referred him to me.

Examination. The entrance to the right nasal passage was somewhat narrow, but immediately behind it was a wide, open cavity for about one-half the normal depth of the passage. There seemed to be complete absence of the inferior turbinated bone, probably removed by surgical operation in Boston, as already related. About an inch and a quarter from the anterior naris, the passage was completely filled by a bright, reddish growth, springing from the septum, the vault above and the middle turbinated. The attachment on the septal side extended down to the bottom of the inferior meatus.

The uvula was very long.

Posteriorly, the tumor filled the whole of the nasal cavity. It extended behind the septum, which it seemed to have pressed to the left. On the right it was attached all the way down to the floor of the naris, and lay immediately anterior to and continuous with the Eustachian tube. This tube occupied a plane considerably posterior to the left Eustachian, no doubt owing to the pressure of the tumor.

In other respects the health of the patient was of an ordinary character, with the exception already mentioned, that he was a hæmophile. He told me that the extraction of a tooth would be followed by bleeding for hours, as also would the slightest cut or scratch.

The question of best method of operating in this case was difficult to decide. In so extensively sessile a growth with base convex from side to side snaring would be impossible, except in small fragments, and by following out Ingals' method of galvano-cautery notches, prior to adjusting the snare. His hæmorrhagic tendency also seemed to contraindicate treatment by this plan. Curetting, cutting away by knife or scissors, also seemed out of the question, on the same ground; as well as owing to the obscurity of the situation. Post-nasally, but a small portion of the growth could have been reached.

Directly surgical operation by excision of the superior maxillary and palatal bones did not seem to be required, as I did not believe these bones of themselves to be seriously involved. There was no external deformity; and the only displacement in the pharynx was a pressure downward of the right side of the soft palate.

Electrolysis I thought of, but, having had no personal experience of its effects in deep nasal work, I finally decided to endeavor to dissect it out, little by little, with the galvano-cautery knife.

On December 1st, I performed uvulotomy to facilitate post-nasal observation.

Two days later, after applying a 20 per cent. solution of cocaine, I made the first galvano-cautery incision, through the anterior naris, into the lower part of the tumor, at its union with the septum, continuing the burning until the hæmorrhage became somewhat severe. An astringent spray soon controlled the bleeding.

Several days later I repeated the operation in the same way, but at the outer margin of the growth, at the site of junction of the former inferior turbinated with the maxillary bone. The hæmorrhage this time was very severe, and I found it necessary to plug with kite-tailed tampons of absorbent cotton, packed solidly within the nasal cavity. This stopped the flow, and twenty-four hours later, upon removing them, there was no recurrence.

After an interval of a week I made the third attempt at galvano-cautery work, incising the central portion between the other two cuts. The electrode was of a bright red heat, and it had only been applied a few seconds when arterial blood commenced to jet forcibly out. The flow was so rapid that with difficulty I caught a glimpse of a large pulsating artery, laid bare and opened by the cautery. It seemed to run across between the septum and the external wall. Having had such a satisfactory result from the previous packing, I again resorted to it.

The patient lay down in my office, and for a few moments the bleeding was checked. Then it commenced again, escaping by the posterior naris, and soon became alarming. Dr. Reeve kindly came to my assistance,

and, after removing the plugs, I packed the cavity from behind by the use of Bellocq's cannula, having first soaked the sponges with a combination of tannic and sulphuric acids. This effectually stopped the bleeding, but the patient was almost pulseless by the time it was accomplished, and two hours later, when being assisted to a carriage, fainted.

This loss of blood confined him to bed for a week, and two others elapsed before he was well enough to proceed with operations again.

On looking up the literature of fibrous tumors of the air passages, I found that Kaarsberg, of Copenhagen, in 1894, recommended electrolytic treatment of fibrous tumors of the naso-pharynx, giving the history of four cases, the treatment being supplemented by the use of the galvano-cautery and scissors; and I decided to try it in this case of fibroma of the nose.

After applying a 20 per cent. solution of cocaine as in the cautery work, I used long needles, isolated by rubber tubing, and inserted through the anterior naris into the growth at a distance of about half an inch from each other. These were attached to a twelve-cell Leclanchè battery. The séances were about five minutes each, and given on alternate days.

Notwithstanding the anæsthetic effect of the cocaine the shock was very painful, even more so than that of the galvano-cautery. The effect upon the tumor was of a deadening nature, making the surface paler, and producing exudation. The shrinkage, however, was hardly perceptible. After using it through the anterior naris three times, I changed the direction of the electric current by passing a single straight needle into the tumor from the front, and a long curved needle through the mouth and naso-pharynx and into the growth from behind. This seemed to produce a more satisfactory effect. The central portion, both anteriorly and posteriorly, lost much of its vivid hue, though the shrinkage produced by four séances was still almost *nil*.

Hoping by this time that the electrolysis would have the effect of limiting the severity of future hæmorrhages, I again returned to the use of the galvano-cautery.

From January 18th to March 15th I operated with it at sixteen different sittings, each time applying the cautery as extensively as I thought I could do with safety. Sometimes there was no hæmorrhage; at others it was only slight; never severe enough to require plugging. Little by little the growth was destroyed. The first half of the operations were performed entirely through the anterior naris, the vision of the parts being obtained through the anterior rhinal speculum. The latter half also were done through the anterior naris, while the operations were guided by the use of the posterior rhinal mirror.

To complete the work, as the pharyngeal tonsil was somewhat protu-

berant, I removed it with Gottslein's curettes as a precautionary measure. The bleeding from the cuts was severe, but was checked without plugging.

In the cautery work the part found the most difficult to accomplish, and requiring the greatest care in manipulation, was the destruction of the part of the fibroid attached to the anterior margin of the Eustachian tube.

The supplementary treatment consisted of daily cleansings with alkaline sprays, followed immediately by removal of crusts, sloughs, etc., with the aid of cotton holders, and finishing with spray of albolene.

Twice over I had sections of the tumor examined by a competent microscopist. He pronounced it a dense, close-grained fibroma.

With regard to the physical condition of the patient, the course of treatment was very satisfactory. With the exception of the time lost as the result of the excessive hæmorrhage, he never lost a day from his professional duties. The operations were always done in the evening. Sometimes he would be restless and suffer pain during the following night; but he could always take a light breakfast, and would go down to his office the morning afterwards. During the latter half of the treatment, notwithstanding the amount of cocaine used, he improved in weight as well as in color and spirits, and, I am glad to say, without acquiring the slightest craving for the drug so frequently used.

One notable feature in the history of the treatment was the extent to which the palate resumed its natural functions. At first, being pressed out of position, it had no control over sprays thrown into the nose, and would allow them to trickle over and drop into the larynx, with paroxysmal coughing as a result. Latterly this accident would never occur, and the nose might be filled with fluid without any escaping into the lower pharynx. In fact, the control over the velum acquired by the patient aided very materially in the treatment of the case, and during this period he appeared before the Toronto Medical Society, so that the members could examine the tumor while still in the process of removal.

I have called this a case of recurrent nasal fibroma, believing that the original attack, from which the present one must have developed, was really fibroma instead of sarcoma. That the former may degenerate into the latter is, I believe, a recognized pathological fact, but that a malignant growth should be the parent of a benign one is certainly open to question.

What the future of the case may be it is impossible to say. At present there is no indication of any tendency to return. A new mucous membrane has reformed. The throat is moist, and the voice normally resonant. Still, that it has been completely and finally eradicated seems almost beyond hope. The case, though interesting, is too recent to base a correct conclusion upon, and I shall watch the future history with more than ordinary solicitude.

SOME REMARKS ON PNEUMONIA, WITH A REPORT OF AN INTERESTING CASE.*

BY REGINALD BRAY, M.D.,
CHATHAM.

IN appearing before you to-day to make some remarks on pneumonia, and to give you a report of an interesting case in practice, I feel rather out of place, because I see about me so many men who are older in years and in time of service; men who, if they would, could probably relate some very interesting cases and experiences; men of tact and originality, of pluck and perseverance; but men who are modest, retiring, and not fond of appearing in public, or forcing themselves and their cases upon a gathering such as we have here to-day; and as more of these men who have interesting cases do not often give expression in public to their views, owing to the active and busy life which they lead, and feeling that when they do take a holiday they would rather hear than be heard, this must be my only plea in craving your kindly indulgence and attention for a few minutes.

Pneumonia. By this we mean inflammation of the lung tissue, characterized usually by sudden onset, fever, cough, expectoration, and dyspnoea, by the physical signs of pulmonary consolidation, namely, engorgement, hepatization, and resolution.

Symptoms. The invasion is, in almost all cases, preceded by a chill or rigor, generally single, and of a severe character, more so perhaps than in any other disease. After the rigor we have fever, and then the symptoms which point to the lung affection, and enable us to make a diagnosis, which are pain (generally, though not always, present so early) in the side, dyspnoea, and a dry, tight cough. These symptoms gradually increase in severity, and are accompanied by accelerated pulse, thirst, and prostration, the dusky face, anxious expression, and hurried respiration, and when we find a patient in this condition our diagnosis should be complete.

Physical signs. We all know that the earliest physical signs are usually to be found in from thirty-six to forty-eight hours. The first abnormal

* Read before the Ontario Medical Association, Toronto, June, 1895.

sign.—physical sign, I mean—which we find is an impairment of the respiratory movements on the affected side. This is owing partly to the pain, and partly to the diminished elasticity of the lung tissue. Percussion at this time is not markedly altered. The vocal fremitus is increased, and now we come to the most important sign, crepitation, which consists of a series of fine, dry crackling sounds, and which is due to the air trying to force its way through the air vesicles. The rate is almost always limited to respiration, and is intensified by deep inspiration and coughing. During the stage of hepatization the fine crepitation ceases, the diminished expansion of the lung is retarded, the vocal fremitus may or may not be altered, the percussion sound becomes diminished in tone, there is increased resistance and bronchial breathing. When a case passes the crisis successfully, we have resolution taking place. This process usually commences in the part of the lung least affected, and the earliest and best sign is the return of crepitation, but crepitation of an altered character, not fine in quality, but rather larger, coarser, and liquid in character; the bronchial breathing loses its ringing metallic quality, the percussion dullness gradually disappears, and the respiratory movements become normal in character. These changes gradually show themselves in a few hours after the crisis.

History of case. The history of the case which I want to bring before you is as follows:

R. M.; foreman in a paint shop; complained on Friday, March 22, 1895, of a slight cough, with some pain in the chest on waking, but he got up, dressed, and went to work as usual. Feeling poorly during the morning, he took a teaspoonful of turpentine, but shortly after taking it he felt rather queer, so went home about 11 a.m. Having a patient in the house at the time, I called in about 2 p.m., when I saw the patient whose history I am now relating. He felt a little out of sorts, but had no fever, and pulse was good; the only thing he complained of was a soreness over the lower part of the abdomen. I advised him to lay off work, but he did not do so, going back to the shop at 2.30 p.m. During the afternoon this soreness became very much worse, so much so that he quit work at 5 o'clock. I was sent for about 7 p.m., and when I arrived I found the following condition: Temperature, 104° ; pulse, 112; respiration, 26. A good deal of pain in right side was complained of, but no physical signs of pneumonia. I gave him antikamnia, grs. 2; quinia sulph., grs. 3, to be taken every four hours. I also ordered 8 grs. of Dover's powder when the pain was severe, and linimentum chloroformi to be applied to the chest, rest in bed, moderate warmth, and milk diet, and said I would call in the morning. I did so about 9 o'clock, and found temperature $102\frac{1}{2}^{\circ}$, pulse 104, respiration 26. Pain in side much

more severe, but not much cough. Bowels moved during the night, and urine was about normal in quantity. He continued in this condition all day, and I continued the same treatment. On Sunday, the 24th, the temperature was 102° , pulse 100, respiration 24. Pain in side still very severe, cough tight, tongue thickly coated, and rusty sputa present. He also complained of a great deal of pain and tenderness over the pit of the stomach and upper part of abdomen. I continued the same general treatment, also ordered patient put in cotton-wool jacket after the liniment had been applied, and hot dry cloths over stomach and abdomen. He continued much in this condition until Tuesday, the 26th, when the left lung became affected, the temperature rose to 104° , pulse 118, respiration 28-32. I ordered stimulants, and decreased the quantity of antikamnia and quinine to 1 and $1\frac{1}{2}$ grains respectively. All day Tuesday, and Wednesday until 4 p.m., his condition was as above described. At 4 p.m. the temperature became subnormal, pulse dropped to 108, respiration 26. He had a short sleep, and at 10 p.m. was quite comfortable. During the night he took a turn for the worse, and became delirious, talking almost incessantly and throwing himself from side to side in the bed. When I saw him in the morning early, I stopped the antikamnia and quinine, as the temperature was subnormal, and gave a little more whiskey, owing to diminished heart's action, and gave also strychn. nitrate, gr. 1-60, every three hours. This condition lasted all day Friday and Saturday, and, hoping to quiet him, I ordered pot. brom., 2 dr. ; chloral hydrate, 1 dr. ; aquæ ad., 4 oz., a teaspoonful every three or four hours. This had no quieting effect whatever. On Sunday afternoon, the 31st, his condition was so critical at 4 o'clock that I called in Drs. F. and B. in consultation ; they agreed that the outlook was bad, but could suggest nothing except an increase in the dose of the strychn. nitrate. On Sunday evening I stopped the whiskey and increased the strength of the bromide and chloral mixture, but he continued to grow weaker and wilder every hour, even going so far as to jump out of bed and make for any one who might be near. This condition continued all day Monday. On Monday evening, the 1st of April, I saw him about 11 o'clock, and his condition was as follows : Temperature subnormal, 96.3° pulse 120, respiration 22, bowels not moved for two days. I ordered a double dose of the bromide and chloral mixture, to be repeated in one hour ; counter-irritation to the feet, cold cloths to the head, body sponged with tepid water and whiskey, and told the family that unless he got sleep before morning he could not recover. The nurse followed my directions faithfully, and about 1.30 a.m. he quieted down, stopped his rambling speech, pulse became stronger and slower, and he went into a doze. He slept (not soundly) for about thirty minutes, when he woke. The nurse gave him some milk, and in a few minutes another dose of the mixture.

Very shortly he went to sleep again, so that by 8 a.m. on Tuesday he had slept two and a half hours. This was the first sleep for five days and nights. When I saw him at 9 o'clock his temperature was subnormal, pulse 96, respiration 20, mind perfectly clear, bowels moved with an injection, and general condition was much improved. I ordered 1½ table-spoonfuls of whiskey in a glass of milk, to be taken every fifteen minutes; also continued the strychn. nitrate, grs. 1-60, every three hours. From that time on his condition continued to improve, and after two days his pulse was stronger and slower, tongue quite clean, no headache, but a great desire for sleep. Decreased the stimulants, and ordered beef tea, broths, etc., to be given him in small quantities, but frequently. On the tenth day I allowed him to sit up in bed, and on the seventeenth day to sit outdoors. He has been on the mend ever since, and now, May 7, is back at work, better than before he was taken down. I might add that I examined his urine at different periods, but could find nothing abnormal either in quantity or constituents. To me the interesting feature of the case was the marked delirium, continuing for five days and nights without a break, coming on after the temperature became subnormal. I cannot account for the change for the better occurring so suddenly, but would be pleased if any one present can give me a solution of the difficulty.

Progress of Medicine.

THERAPEUTICS

IN CHARGE OF

GRAHAM CHAMBERS, B.A., M.B. Tor.,

Professor of Analytical Chemistry and Toxicology, Ontario College of Pharmacy; Lecturer
in Organic Chemistry and Toxicology, Woman's Medical College;

AND

WILLIAM LEHMANN, M.B. Tor.,

Physician to the Home for Incurables and House of Providence.

KONIG-MAAS'S METHOD OF RESTORING PERSONS APPARENTLY DEAD FROM CHLOROFORM.

The following is a description of the method as practised at the Göttingen clinic: The operator, standing on the left of the patient and facing him, places the ball of the thumb of the opened right hand upon the patient's chest, between the place of the apex beat and the sternum. He then repeatedly presses in the thoracic wall with a quick, strong movement, at the rate of about one hundred times per minute. The results by this method have been very satisfactory.

HEPATIC COLIC.

The Paris correspondent of the *Medical Press and Circular* states that Ferrand made the following statement in his lecture:

(1) The gallstone is formed of a hard and chalky substance called cholesterine and divers coloring matters. Chemically, it is ranked among the alcohols, while physically it is a stone of varied form and dimensions. The first question that imposes itself is, Have we at our disposition therapeutic agents capable of acting directly on the calculus, either to dissolve it or break it up? The ancients would answer in the affirmative, for they had a series of medicines which they called lithotritics, because they attributed to them the power of dissolving the calculi. But it is well known to-day that these agents possess at most a preventive action on the

formation of these bodies. The writer made some very conclusive experiments in that direction with chloroform, ether, turpentine, and glycerin, and the results in each case were negative.

(2) If, however, we are disarmed against the gallstone in the first element of the malady, is the case the same with the other elements? As soon as the calculus has got stuck in the duct, the course of the bile is arrested, and accumulates above the obstacle, distends the gall-bladder and the biliary canals, producing, as a consequence, turgescence of the whole organ and more or less congestion of the liver, which, not yet disturbed in its intimate structure, continues to secrete the bile, although in less quantity than in the normal condition. But as soon as the tension increases in the biliary ducts, the calculus is pushed forward by the current and falls, not infrequently, into the intestine. The fact of the expulsion of the stone by tension of the bile forms the basis of expulsive medication. We have consequently to seek those agents which, by increasing the biliary secretion, can facilitate the expulsion of the foreign body, and the substances corresponding to this indication have received the name of cholagogues, in the first rank of which may be placed glycerin. Among others may be mentioned olive oil, administered in large doses. Chauffard advises ten ounces to be taken, but Willemin considers such massive doses unnecessary. In what way the oil acts is as yet an open question. Stewart thinks that it is converted into glycerin and saponifying matter in the intestine, while Willemin believes that the substance does not undergo this change, but by some reflex action arrests the spasm of the biliary ducts and the pain caused by the spasm.

Salicylate of sodium is a cholagogue which produces an abundant biliary flux. In many painful cases, where the kidneys were sound, the author obtained good results from this agent. The same may be said of chloroform and ether, both of which can give by reflex action a considerable increase in the biliary secretion. Calomel, so frequently employed as a purgative in hepatic colic, deserves special mention. This salt not only acts in an indirect way on the liver in provoking an increased secretion, but also as a direct stimulant on the hepatic cell. Mercury salts—more, perhaps, than any of the other metallic salts—are arrested in the liver, producing by accumulation the stimulating action which gives to calomel the properties of a cholagogue so universally admitted.

A few alkaloids, recently discovered, supposed to be beneficial in such a case, are podophyllin, euonymin, iridin, baptisin. Of the four, the first two only can be counted as evacuators. Benzoate of sodium and lithine have been also recommended.

(3) The third indication resides in the painful spasm of the hepatic colic, and the treatment must be directed to that symptom. Naturally,

opium and its preparations take the first rank in this direction, and more especially morphine combined with atropine in subcutaneous injections. Belladonna does not diminish the biliary secretion, and provokes the contraction of the organic muscles, and by this means favors the expulsion of the calculus. Chloroform and ether have been given internally with much benefit, while external warm applications are found by the patient to be very soothing. Enemas of cold water have been used very freely, in order to stimulate the peristaltic action of the intestine, but enemas of senna tea, followed by enemas of valerian root, or some other anti-spasmodic agent, are to be preferred.

(4) There is yet a fourth indication. To treat the congestion incident to hepatic colic, recourse should be had to emollients, poultices, or warm fomentations, and, when these are not well borne or do not succeed, friction with chloroform or opium liniments may be tried. If the inflammation does not yield to this anodyne treatment, leeches, followed by blistering, and small doses of calomel, should be ordered. To resume :

First Indication.—No means at our disposal.

Second Indication.—Glycerin, olive oil, salicylate of sodium.

Third Indication.—Injections of morphine, associated with atropine, chloroform, or ether internally ; poultices or warm fomentations.

Fourth Indication.—Poultices, frictions with sedative liniments, leeches, blisters, calomel in small doses, intestinal antiseptics.—*Therapeutic Gazette.*

TREATMENT OF THE ITCH.

Friction is not easily endured by children, as it irritates their delicate skin. M. Feulard (*Rev. Int. de Méd. et de Chir. Prat.*, December, 1894) prescribes the following to replace it :

(1) Applications to the regions which are generally the seat of the disease with the following pomade :

R. Adepis, ℥vi.
Balsamo Peruvianæ, ℥v.
Naphthol, ℥i.

(2) The following day this should be washed off with soap and dusted with almond meal.

(3) This treatment is continued for two or three days, the cutaneous irritation being calmed by the following ointment :

R. Vaseline, ℥i.
Zinc oxid., ℥i.

—*Therapeutic Gazette.*

SURGERY

IN CHARGE OF

L. M. SWEETNAM, M.D. Tor.,

Lecturer on Therapeutics in the Woman's Medical College; Surgeon to the Outdoor Clinic, Toronto General Hospital; Surgeon to St. Michael's Hospital;

AND

A. PRIMROSE, M.B., C.M. Edin.,

Surgeon to the Hospital for Sick Children, etc.

SURGICAL PHOTOGRAPHY.

Modern photography has not taken the place that it deserves in surgical practice as an aid in the recording and registration of cases. In the old wet-plate days the making of a negative was a matter of much labor; and to do it satisfactorily presupposed no small amount of experience and skill on the part of the operator. Nowadays, with dry plates and films of extreme rapidity; with ateliers everywhere where the mechanical parts of the process can be done; with electricity and flash lights which render skylights unnecessary, and make us independent of the sun; and with the expense incidental to the process reduced to a trifling sum, it is a marvel to us that a camera is not an adjunct to every operating room and surgical clinic. What verbal picture can reproduce a lesion, a deformity, a tumor, like a photograph? What record in words can have the effect of a photograph before and after operation? What description can tell so much as accurately as does the sensitive plate? A photographic record, as it can now be made, would be invaluable to the surgeon for recording and keeping track of his cases, as well as for his more strictly scientific work.

It is perfectly possible to do so with an inexpensive camera and lens and a few plateholders. All the rest of the work, developing, printing, toning, and mounting, is now done so cheaply that it hardly pays the amateur, unless he desires to do the work, to undertake it himself. He focuses his camera and exposes his plate, and he obtains a record far more valuable than one in words could be, more especially since the personal equation is entirely eliminated from his description.

For the best kind of work, of course, elaborate apparatus and great technical skill is required; but ordinary photography any amateur can accomplish. How great is the advantage of the surgeon who is a

draughtsman ; yet what draughtsman does work that can begin to compare in accuracy and rapidity with the very smallest and roughest blue print ?

We firmly believe that the time will come when the camera will be as necessary and universal an adjunct to the work of the careful surgeon as his case book is ; and when, light painting being so easy, verbal descriptions of external lesions will be looked upon as insufficient and misleading. —*International Journal of Surgery.*

ANTIPYRIN IN SURGERY.

In the *Philadelphia Medical News* of December 15, Dr. Roswell Park again calls attention to the value of antipyrin as a styptic. He has made frequent use of it since 1885, and does not hesitate to pronounce it the most valuable styptic we have, and an antiseptic as well, comparing "very favorably in this respect with most of the aniline or coal-tar derivatives that we use in medicine." He employs it most frequently in a five per cent. solution, in sterilized water, as a spray, and does not hesitate to use it in the peritoneal cavity, or upon the surface of the brain. He says : "I have found that antipyrin has power, not sufficient to contract vessels of any size that spurt, but to almost instantly blanch and check oozing from any surface from which blood is escaping just fast enough to be an annoyance." "It may be injected into a cavity, as in bone ; it may be applied on compresses to the oozing surface, or it may be sprayed as mentioned ; but, no matter how applied, under circumstances indicated within the limits given, it will seldom, if ever, be found to disappoint." He has found it, bacteriologically and in practice, antiseptic, and it is practically unirritating. It is especially valuable in operations within the nose, mouth, urethra, and bladder.

The remarkable analgesic properties of antipyrin, locally applied in inflammation of mucous membranes, have been pointed out by Hinkel (*New York Medical Journal* for October 28, 1888), Vigneron (*Concours Med.*, August 11, 1894), and others. We shall be glad to have reports from other surgeons who have used it, and especially pleased to know if it can be used without harm about the eyes. If so, it will prove a great boon to the ophthalmologist in some operations upon the eye and its appendages, which are often rendered very tedious and difficult by the presence of even a small quantity of blood.—Editorial in *The Railway Surgeon*.

A CASE OF TETANUS, WITH DEMONSTRATION OF BACILLI, TREATED WITH
TETANUS ANTITOXIN.

A case is reported (*New York Medical Record*, 1895, xlvii., 5) by W. Gilmour Thompson. The patient was a boy, aged 13, who, three weeks before admission to hospital, had been injured by stepping on an iron fence spike, which penetrated his shoe, making a wound in the ball of the right foot. Symptoms of tetanus appeared five days prior to admission, and sixteen days after the injury. The diagnosis was confirmed by finding specific bacilli in scrapings taken from tissue about the hole in the boy's foot. On the thirteenth day of the disease injections of antitoxin were begun, and continued daily, the dose varying from a half to one c.c. daily for five days. Recovery was complete.

ASEPSIS VS. ANTISEPSIS.

The Lancet, in its article "The Annus Medicus, 1894," refers to the general tendency at the present time in the treatment of operation wounds to aim at asepsis, as opposed to antiseptis. This is very evident to those who are working in the field of surgery, and the time will be welcomed when it will be considered safe to operate without the necessity of bringing irritating antiseptic materials in direct contact with fresh wounds. Methods of sterilization of instruments and dressing, etc., must, however, be more efficient and trustworthy before we can, with safety to our patients, omit in all cases such safeguards as irrigation with carbolic acid or perchloride of mercury.

The article referred to also calls attention to the fact that intravenous injections of saline solutions is steadily growing in appreciation, but chiefly in regard to cases where the fall of blood pressure is due to an excessive loss of blood, and not merely to collapse.

Editorials.

THE AMALGAMATED JOURNALS.

THE lion and the lamb have lain down together. All our nice ideas about welcoming a new subscription journal from the ranks of the purely and solely advertising sheets, as expressed in an editorial in February, have been dissipated, and the *Dominion Medical Monthly* has reverted to a purely advertising journal, and absorbed its competitor, the *Ontario Medical Journal*.

The little advertisement referred to in February has been remodelled, and the post-office authorities might explain why a free circulation journal (in Ontario, British Columbia, and the Northwest Territories) is allowed the same privileges as subscription journals.

Things are still done in style, and the *edition de luxe* is sent to advertisers only, while the *edition de ordinaire* is scattered broadcast amongst the profession, and by most of them relegated to the waste-paper basket.

Whether the *Ontario Medical Journal* had the power to assign its contract for council printing to a tenderer who was below them in price or not, we are not sure, but it appears as if it had.

Time will show how this new deal will turn out, but the profession and the best class of advertisers are averse to purely advertising sheets and possibly some of them have not been made aware of all the peculiarities of the case, and maybe some are still under the delusion that an American edition is published. *Verbum sap.*

THE PATRONS' MEDICAL BILL.

WE have received a copy of the Seaforth *Sun*, which contains a sensible article on the most remarkable of modern productions—the Patrons' Medical Bill—which was so ignominiously crushed when it came before Parliament. It will be remembered that only one member outside the Patron party voted for it. This wise legislator was Mr. Murdo Y. McLean, of Seaforth, South Huron riding. The *Sun*, in the

article referred to, disapproves of Mr. McLean's course, and supports the attitude of the immense majority who voted against the proposed bill.

We note with pleasure that the profession of Ontario are practically a unit on this question, and have shown a determination to bitterly oppose a movement which would necessarily lead to degradation and dishonor. To us, as physicians, there is no question in provincial politics which is at all comparable with an infamous effort to destroy everything like honesty, respectability, and decency in our profession. We acknowledge that the profession of medicine is not perfect, but are glad to add that a majority of its members desire to see it go forward rather than backward.

It is very important that physicians, in discussing this question, should endeavor to enlist the sympathies of the public. As a matter of fact, our interests are one. As our standards become higher, our doctors become better morally, and in every other way; and the public, especially the sick poor, receive the benefit. It is not in the interest of the public that our status should be degraded in any way. It is not in the interest of the public that women in labor should be left in the hands of uneducated midwives. It is not in the interest of the public that any difficulties should be thrown in the way of punishing conduct that is "infamous or disgraceful."

THE MEDICAL COUNCIL AND THE PUBLIC.

THE lay newspapers (very good papers they are, by the way) of Huron county appear to be taking a good deal of interest in medical politics. We have received a *Huron Expositor*, July 26, containing a letter from the able and worthy representative for that district in the council, Dr. Graham, of Brussels; and, in addition, an editorial in reply to the same.

From this editorial we quote briefly as follows: "The Medical Council, if it is, what is claimed for it, a body composed for the protection of the people . . . should be, in some way, as directly under the control of the people as possible. We say that the people, either directly, or through their chosen representatives, should have some voice in the composition of that body; it should also be subject to the control of the people, either directly, or through their representatives in the government; its legislative acts should be submitted to, and should receive the approval of, the government before they become operative."

We have no objection to raise against the principles involved in these sentences. They are substantially correct. We might add: The Council was organized in the interests of the profession as well as the public. We have no doubt the government, representing the public, established the

Council with these objects in view—the interest of the people being the first or chief consideration. The government had not simply “some voice in the composition of that body”—it had the whole voice. The government can amend or annul the Act governing the Council at any time. We can scarcely see how the interests of the people can suffer unless parliament wilfully betrays its trust. At the last session of the Ontario Legislature a determined effort was made to pass radical amendments to the Act referred to—not in the interests of the public, but in the interests of, and with the assistance of, notorious and dishonest charlatans.

After all, there is not much difference of opinion between the *Expositor* and ourselves. We agree on the general principles involved, we differ on details. We know of no better system for the governance of the medical profession than our own. We believe it is becoming more popular with both the profession and the public—as is evidenced by the decisive vote of last session in parliament. Its continued popularity largely depends on the acts of the Council and the profession. Any attempts in the direction of a prohibitive standard, or efforts to favor physicians in any way at the expense of the public, will be not only resented, but will be certainly defeated. Certain expressions of opinion on such matters have to some extent alarmed the public, but the actions of the Council at its last session did much to remove such fears. The *Expositor* will find out, after all, that it is to a large extent a matter of details (but not “quibbling about words”). Let it carefully study the course of the honest and conscientious local member in the Council, Dr. Graham, and we think it will discover that he is ever actuated by a desire to ennoble the profession of medicine, to endeavor to increase its efficiency, and thereby to make it more useful to those who are sick—whether they are rich or poor.

THE JAMES CASE.

THE circumstances surrounding the death of Miss James show that when a respectable doctor takes charge of such a patient he assumes grave responsibilities, with, sometimes, serious risks. After the death of Miss James, we learned from the newspapers that the detectives worked up the following chain of circumstances: A young woman went to Dr. Lehman's house for treatment. He at once provided a quiet boarding house for the stranger. The woman owning the house was to take care of her. The doctor made several visits. The patient grew worse. Another doctor had to be called in. An operation was performed. The patient died five or six days after the operation. The lover told some person that the doctor ought to have done his work better, as he “got forty dollars for

the job." The post-mortem examination showed that death was caused by septicæmia, pregnancy had existed, the contents of the uterus had been removed, and the cervix had been lacerated. A few embellishments skillfully added, with sensational headlines, and numerous and various mysterious phrases, made a pretty clear case.

The evidence at the inquest brought out the following facts: A young woman who had been teaching school in the west was passing through to her home east of Toronto. Feeling ill, she went to a doctor—the first she could find—Dr. Lehman. She told the doctor that she was too ill to continue her journey, and would like to be directed to a boarding house. He did not make a positive diagnosis, but suspected appendicitis or typhoid fever. He found a boarding house, kept by a woman in whom he had confidence, where he had before sent patients, both male and female—none for accouchement, however. In a few days he discovered pregnancy, and, the symptoms being serious, he sent for Dr. E.E. King in consultation. As there were severe rigors, an offensive discharge, high temperature, and rapid pulse, they decided to empty the uterus. Chloroform was administered, the cervix dilated with great difficulty by fingers and steel dilators, and a putrid foetus, which must have been dead two or three weeks, was delivered. Appropriate treatment was carried out, but patient died about six days after. She had been in the house altogether about eleven days. Two days before her death she paid, without solicitation, on account, forty dollars, thirty-five to the doctor for himself and consultant, and five dollars to landlady. Dr. Lehman and the landlady were extremely frank in giving evidence. The pathologists showed that septicæmia must have existed some time (before Dr. Lehman saw her). All the direct and all the collateral evidence went to show that Dr. Lehman was absolutely guiltless of anything criminal, immoral, or unprofessional in the slightest degree. The jury did exactly the right thing by embodying in the verdict a clause completely exonerating Dr. Lehman from all blame.

THE MONTREAL MEDICAL JOURNAL.

WE are exceedingly pleased to see our contemporary, the *Montreal Medical Journal*, appear in a new and enlarged form. The change is a great improvement, and will undoubtedly be appreciated by its patrons. The price has been advanced, but the advantages anticipated will more than recompense the subscriber for the extra dollar. We wish the *Journal* every possible success.

THE DOCTOR IN FICTION.

THE doctor or surgeon often appears in fiction. In former times he, not infrequently, was represented as an ignorant and bumptious character. As the profession has advanced in the gradual process of evolution, aided by increased knowledge of science, the doctor has advanced to a higher plane; he has sometimes been painted in colors that are rather flattering to our guild—sometimes, *otherwise*.

Ouida has given us a story in the *Illustrated London News*, entitled "Toxin"—perhaps in imitation of Grant Allen in "The Devil's Die"—in which she tells us about a wicked English surgeon, named Damer, who, after saving the life of an Italian prince, stayed with him until a beautiful woman appeared on the scene, and captured the affections of both surgeon and prince. The prince happened to be attacked with diphtheria, and the surgeon put an end to the sufferings of his rival by administering a dose of the "venom of the toxin," under the name of antitoxic serum. The *British Medical Journal* says: "The story is as silly as Ouida's productions usually are, but with that we have no concern. What we do protest against is that a scoundrel like Damer should be presented as the type of a scientific surgeon. There can be no doubt as to the purpose of Ouida's story; it is an attack—feeble and futile, it is true, but most malignant in intention—on the medical profession. . . . When she speaks of the 'hills created by modern science,' and of the time being near at hand 'when there will be no kings but those of science, and beneath their feet the nations will grovel in terror and writhe in death,' she merely talks nonsense; but when she represents the search after scientific truth as naturally leading to crime, she utters an infamous falsehood."

Among the many good Scotch novels which have lately appeared is one by Ian MacLaren, entitled "Beside the Bonnie Briar Bush," which contains a series of pretty stories, including one under the title of "General Practitioner," or a "Doctor of the Old School," giving a description of the life of Dr. MacLure in the Parish of Drumtochty. It is a most beautiful and touching story, giving various details of MacLure's life work, which are extremely interesting. He paints MacLure as a hero of the highest and noblest type, who lived and died for his patients, whom he loved—who were wife, and family, and all the world to him. The tone of Ouida's story is bad, debasing; the tone of MacLaren's story is good, ennobling. We prefer MacLaren, and appreciate the compliment he pays to our profession in making his brightest and noblest character a physician. To our readers we may say: If you read the book, you will do so, we believe, with pleasure and profit—but not with *dry* eyes.

BACTERIOLOGICAL CONVENTION.

ON the 21st and 22nd of June there were held in the building of the New York Medical Academy a series of meetings, the results of which, in the field of bacteriology, will probably be most far-reaching and useful. A convention of bacteriologists from all parts of America was called last year by the American Public Health Association, in order to consult with regard to many questions which are of prime importance in bacteriological work. The primary object of the convention was to determine to what extent and by what means uniform methods of work might be followed in the study of the bacteria of water, but the results will probably be much more wide-reaching, affecting bacteriology in all of its applications. So far as we know, this is the first convention of the kind that has been held, and the necessity for such a meeting and for future reassemblings of the workers engaged in bacteriological research was amply demonstrated at an early stage of the proceedings.

Any one who has given even slight attention to the subject must have been struck with the lack of uniformity of results in the study of the same organisms by different men, and, indeed, by the same men at different times. This, to the ordinary observer, seems the more unaccountable since text-books in bacteriology lay down with a degree of precision methods to be followed in laboratory work. Attendance at a single session of this convention showed where the trouble lay. It would appear, too, that a great part of the difficulties in the way of the worker can be removed with comparatively little trouble.

To Dr. Smart, of the Surgeon-General's Department, Washington, together with Professor Adami, of McGill College, Montreal; Mr. George W. Fuller, of the Lawrence Experiment Station, Mass.; and Dr. Wyatt G. Johnston, of the Board of Health, Montreal, belongs the credit of having called the meeting and arranged the programme. The chair was occupied by Prof. Welsh, of Johns Hopkins University. The papers read were all of merit, and will be published at the proper time. We do not propose to give even an abstract of any of them, but may sum up the results in a word.

All of our present media, and many of our methods, are unsatisfactory in some respects. It will be necessary for purposes of comparison that media and methods be exactly the same in all laboratories, and that variations be accurately controlled. As things are at present, these conditions are far from being fulfilled. For example, one worker secures the reaction of his media by means of *one* chemical, another by *another*; one uses titration methods in fixing reaction, another works in a much rougher way. Again, the materials used may differ greatly in composition; for example,

one laboratory uses Sargent's peptone, another Witte's, and analysis proves that they differ from one another. Many examples could be adduced to show the necessity of change in our ways. It would seem that media prepared synthetically, chemically pure materials being used, must come into vogue before long. Mr. McKenzie's paper recorded some very interesting work in this direction.

The chief practical result of the meeting was the appointment of a committee of eight leading men to answer certain questions and suggest ways of overcoming the difficulties spoken of. Their work will be looked for with considerable impatience by bacteriologists—in America, at least.

THE BUFFALO MEDICAL JOURNAL.

THE jubilee number of the *Buffalo Medical Journal*, published this month, reflects much credit on both publishers and editors. As we informed our readers in our issue for April, this journal is fifty years old, having been established in 1845 by the late Austin Flint, M.D. It was the first journal established between New York and Cincinnati or St. Louis, and proved a success in all respects in a very short time. The jubilee number contains a very interesting special article, written by Dr. William Warren Potter, giving the history of the journal for the fifty years, involving, as a matter of course, a history of the medical profession and medical colleges of Buffalo during that period. Again we extend to Dr. Potter our sincere congratulations, and best wishes for continued success in the future.

KENT COUNTY MEDICAL ASSOCIATION.

A MEETING of this association was held at the Garner House, Chatham, July 10, 1895, of which an excellent report appeared in the *Chatham Daily Planet*. Dr. Bray, the representative of Division I. in the Ontario Medical Council, gave a brief report of the proceedings of the June meeting of that body, which was apparently well received by those in attendance. He dwelt especially on the collection of the annual assessment, which is, at least, one of the most interesting subjects for general practitioners to consider, and was very fully discussed in the Council. Dr. Bray also referred to discussions on various matters of finance, the expenses connected with salaries, the building, and the work of the Discipline Committee.

We will not here attempt to discuss any portions of Dr. Bray's address to his constituents. He expressed his views in the Council on all subjects that came up for consideration, and they are recorded in the Council's *hansard*. We simply desire to call attention to the fact that Dr. Bray took the earliest possible opportunity to explain to his constituents the exact position of many vexed questions, from his point of view, at a time when there was considerable excitement in medical politics in this province. His course in thus acting was a wise one in every respect, and worthy of imitation by his brother members. We are glad to know that the increased interest taken in the Council's proceedings is likely to be permanent and intelligent in character. Those members of the Council who endeavor to explain to the professional public all matters of interest to physicians, calmly and dispassionately, without any appeal to passion or prejudice, are likely to accomplish much good.

THE CANADIAN MEDICAL ASSOCIATION.

THE provisional programme for the next meeting, to be held August 28, 29, 30, has been sent to the members by the secretary, Dr. Starr. It will be seen by it that the meeting will be held in the Convocation Hall of Queen's University. We learn from Dr. Starr's circular the following points: A member should purchase a ticket for Kingston from the station agent at the place of departure, and get from him a standard certificate (which is a receipt for one full single fare). When registering at the meeting leave the certificate with the treasurer, and it will be returned, signed by the secretary, on the morning of August 30. This certificate, when presented to the station agent at Kingston, will entitle the bearer to a ticket to his destination (1) for one-third of the single fare, if there are 50 or more holding standard certificates; (2) free of charge, if there are 300 or more holding such certificates. These rates refer to delegates and their wives. Arrangements have been made with the hotels for special hotel accommodation. Rates per day: Frontenac and British American, each, \$2.00; City, \$1.50.

The Ontario Medical Council.

(Concluded from 1a

Tuesday, June 25.

NO MEDICAL TARIFF.

Dr. Williams introduced the question of medical tariff. He said that he simply wished to learn what opinion the council held upon the matter. He thought personally that in view of the rumpus the Patrons had kicked up in the country it would be well to allow the matter to stand for a year or two until things quieted down.

Dr. Harris advised that no action should be taken.

Dr. Henry thought there should be a legal tariff which would protect medical men in the courts.

Dr. Rogers said that since the tariff had been abolished medical men in his part had suffered. He told of a case where a medical man had put in a bill for \$60, which was reasonable. The judge allowed him but \$15, and in delivering judgment took occasion to ridicule the medical profession in general. If the council would frame a tariff which would be sanctioned by the Local Legislature, it would be binding upon the courts. At present, when a doctor put in a bill and the case went to the courts, it was a sorry spectacle to see two or three medical men swearing on one side that the bill was a reasonable one, and, on the other, two or three swearing quite the contrary. Sir Oliver Mowat had written to him saying that the most vulnerable point of the whole matter was that the council wanted to fix the tariff. He said that if a tariff was framed and revised by some independent body, he thought it would be an easy matter to pass it through the legislature.

Dr. McLaughlin said that the government could do nothing in the way of passing the tariff. It just depended upon how the members felt on the matter. A great deal of trouble had been made throughout the country by the Patrons. He thought that matters should be allowed to stand.

Dr. Henry wanted to know if the profession intended to submit, and allow the Patrons to regulate their tariff. He did not fear the issue, and would like to see the council take a firm stand, and ask the government to grant them a reasonable tariff.

Dr. Roome said that medical men had, like all others, to be governed by public opinion. Public opinion at present was against a tariff. The people had an idea that the doctors had joined together to form a monopoly, and this feeling would have to quiet down before anything could be done.

Dr. Thornton thought that it would be foolish for the council to frame a tariff, since there was no unanimity of opinion among medical men themselves. Some wanted a tariff, others did not. The matter was her allowed to drop upon the advice of Dr. Campbell, who pointed out that until medical men could agree to some basis there was no use weakening their case in the public mind.

Dr. McLaughlin pointed out that the by-law appointing the Discipline Committee was not legal. On consulting Mr. Osler, it was found that there was a clerical error, and a new by-law was drawn up, which was passed by the council.

Dr. Henry presented the report of the Committee on Complaints, which recommended that no action should be taken in the case of Mr. E. A. Foster against Dr. A. J. Johnson, the council having no power to deal with the matter; that the cases against Drs. W. E. Olmstead, of Caledonia; H. O. Martin, Toronto; J. H. Danter, Toronto; and C. Parsons, Coe Hill, who have been accused of unprofessional conduct, be referred to the Discipline Committee; that we have carefully considered the nineteen appeals from students, of whom fourteen were final men, and were plucked on medical and surgical anatomy at the last examinations, and, in view of the unusual character of the questions asked, we recommend that the council grant registration to H. E. Wallace, W. E. McKechnie, and Alexander McKay. These gentlemen passed with credit on all other subjects.

The report was adopted.

ADJOURNED MEETING.

The following notices of motion were given:

By Dr. Campbell: "That a committee be appointed to watch legislation in the Provincial Legislature, and to advise the Executive Committee on such matters, and to report at the next session of the council; such committee to consist of Drs. Thorburn, Williams, Barrick, Roome, and Emory."

By Dr. Sangster: "That a committee of four members, viz., Drs. McLaughlin, Williams, Barrick, and Campbell, be appointed to consider the whole matter of discipline, committee trials, and public prosecutions, as to their cost, effect, and mode of procedure, with a view to simplification and economy, without interfering with their efficiency, and to confer with the Attorney-General, if thought advisable, as to the feasibility of assimilating

our modes of procedure with those obtaining in the Law Society ; also that pending the report of this committee next year, and the action of this council thereon, all Discipline Committee trials and public prosecutions be in the meanwhile suspended."

By Dr. McLaughlin : "Whereas, since the beginning of June, 1887, up to the present meeting of the council, members whilst in attendance on meetings of this council and committees thereof have appropriated to themselves as hotel expenses the moneys of the College of Physicians and Surgeons of Ontario ; whereas such appropriation has been made without the authority of law ; therefore, resolved, that the registrar be instructed to prepare and lay before this council forthwith a detailed statement of all appropriations thus received by each member of the council in office between the periods above mentioned."

Several communications were read. One was from Mr. B. B. Osler, on the subject of the fees payable by the registered members of the college, in which he pointed out that other similar organized bodies charging an annual fee made it a condition of continuing membership that the annual fee should be paid, and that this was not looked upon as a hardship, but as a necessity. He suggested to the council the following alternatives : To do away with fees altogether, to go back to the old Division Court method of collection, or to pass the by-law removing the suspension of the payment of fees in such form as to the council may seem best. A letter was read from Mr. O. F. Rice, manager of the Yonge street branch of the Imperial Bank, pointing out the necessity for the continuance of a general assessment in view of the present position of the loans of the council, and notifying the president that unless such an assessment were maintained he would be obliged to call upon the members of the corporation to individually guarantee its loans.

It was moved that the Executive Committee for the coming year consist of the president, the vice-president, and Dr. Campbell.

The council then went into committee of the whole on the report of the Printing Committee, but could not find the report, which had in some way been misplaced. The committee accordingly rose without having done any business, and the council adjourned, to meet at eight o'clock in the evening. A motion to the effect that the matriculation fee be fixed at \$50 was referred to the Education Committee.

EVENING SESSION.

Dr. Campbell moved his resolution, of which notice had been given by him during the afternoon, with regard to a committee to watch legislation.

Dr. Williams paid a tribute to the usefulness of last year's committee. He suggested the addition of the name of Dr. Sangster, those forming the committee being Drs. Barrick, Emory, Roome, Sangster, Thorburn, and Williams.

A motion by Dr. Barrick dealing with the duties of the Finance Committee and the treasurer was referred to the Committee on Rules and Regulations.

A report of the Committee on Complaints was presented by the chairman, Dr. Henley, in which the petitions of two students, Albert Dowling and S. H. McCammos, for reconsideration of their cases, were refused.

The council then adjourned.

Wednesday, June 26, 10 a.m.

The president called the attention of the members to the fact that the present session had already been very much prolonged, and asked them to bear that fact in mind in their discussion of the matters that would come before them, in order that the business of the council might be expedited.

Dr. Sangster moved his resolution for a committee to consider the question of trials and discipline, with a view to their simplification, of which he had given notice on Tuesday. In doing so, he said that, undoubtedly, these trials had been, and were still, a severe tax upon the resources of the council. Their cost was somewhere between two and three thousand dollars a year, and it was an open question whether the good resulting from them was commensurate with the money expended. He thought the present system was too elaborate, complicated, costly, and clumsy, and, if the committee which he proposed would take the matter into consideration, they would evolve some plan by which the cost of these trials might be reduced. He also suggested that the committee should consider the subject of restricting the sale and advertising the sale of quack nostrums.

Dr. Britton proposed, in amendment, that the matter be referred to the Discipline Committee. The amendment was finally carried by 17 to 12, and the council adjourned until two o'clock.

AFTERNOON SESSION.

Dr. Thorburn, chairman of the Committee on Finance, read the report of his committee. The treasurer's report showed receipts amounting to \$45,201.69, including a balance on hand, June 12th, 1894, of \$315.37. The expenditure for the year was \$44,186.06, and the balance on hand on the 11th instant was \$1,015.63. The cost of maintenance of the building was \$4,021.84. The more important recommendations contained in the report were the following :

"In order that the council may receive a continuance of the accommodation from the bank, we recommend the reimposing of the annual assessment. By the collection of outstanding liabilities we can meet all claims, but the prompt payment of the annual fee is an absolute necessity to enable us to meet satisfactorily accrued and accruing obligations."

"That the salary of the prosecutor be \$600 per year, and that all expenses for prosecuting irregular practitioners be paid by him, except in cases of appeal, and that the latter, before proceeding, must receive the approval of the president and registrar."

"We would also suggest the expediency of holding all examinations in Toronto, thereby reducing the expenditure by \$350."

The report referred to the demand made by the bank for personal guarantees for further loans if the annual fee was suspended, and to the assurance given by the committee that it was quite possible the council would reimpose the annual fee and collect past dues. The report continued: "Previous to the erection of our building, we found it almost impossible to secure suitable premises for holding the meetings of the council, and more especially for our spring and fall examinations; therefore the council decided to erect the present building, which is so admirably adapted for the purposes of the council that we think it desirable to inform the council that the resources and means of the profession and council are sufficient to enable us to retain the building; but if, upon further consideration, it be found advisable to dispose of the building, it should be done at such time as in the best judgment of those qualified to advise us upon the subject will secure the best price. The committee have carefully considered the question of disposing of the building, and are of the opinion that, if necessary to do so, the present time is inopportune. We are encouraged to hope that in the near future there will be a substantial increase in the value of property, especially in this locality."

Included in the report was the financial statement of assets and liabilities. It showed assets of \$126,535.62, which included the building at \$100,000, and unpaid assessments amounting to \$22,000. The liabilities amounted to \$72,500, of which \$60,000 was a mortgage on the building. The balance in favor of the college was \$54,035.62.

THE PRINTING CONTRACT.

The report of the Printing Committee had precedence for consideration by the council, and occasioned a lengthy debate. It recommended that the printing of the annual announcement of the college be awarded to the *Ontario Medical Journal* at \$360. Dr. Sangster moved in amendment that the printing be awarded to the *Dominion Medical Journal*, Dr. Beattie Nesbitt's name being substituted for that of Dr. Orr in the report. This excited a heated controversy, in which the claims of the two journals were vigorously upheld by their friends. Dr. Britton moved a second amendment that the contract be awarded by tender, and given to the lowest bidder, whoever he might be. The discussion lasted through the greater portion of the afternoon, and was taken part in by almost all the members of the council. Both amendments were finally defeated, and the report was passed as originally drafted.

A short report of the Committee on Rules and Regulations was adopted without discussion.

A DISCUSSION ON FINANCE.

Dr. Thorburn moved that the council go into committee on the report of the Finance Committee. Dr. Armour started to make a general statement on the report, but was ruled out of order, and the report was taken up clause by clause. When the clause providing for the assessment of members was reached, Dr. Armour at once objected to it. He claimed that there was no necessity for the imposition of fees in order to obtain sufficient revenue for the purposes of the college, and he quoted from a statement which he had compiled, and which showed that, irrespective of an assessment, a revenue could be obtained amounting to \$13,400 from various sources. The estimated expenditure he placed at \$9,900, which would leave a surplus of \$3,500 to be applied toward paying the expenses of the building. He considered that the authority to assess the tax granted in 1874 was unconstitutional. It had been withdrawn by the legislature, and he did not think that it could be shown that there was any moral or legal liability resting upon any one to pay what was certainly an illegal tax. He thought there could be no question as to the legality of imposing this tax now, but there should be shown the most urgent necessity for it before it was imposed, and especially it should not be imposed for the purpose of obtaining money with which to maintain the present building. He moved that the clause be struck out.

Dr. Thorburn briefly supported the clause, pointing out that the present financial position of the council made the imposition of such a tax absolutely necessary. The debate was continued by Drs. Brock and Bray, in favor of the report, and Dr. Thornton, in favor of Dr. Armour's amendment.

EVENING SESSION.

At the evening session of the council Dr. McLaughlin moved the resolution of which he had given notice the day before, instructing the registrar to submit a detailed statement of all appropriations received by members of the council as hotel expenses since June, 1887.

Dr. Campbell opposed the motion on account of the assumption contained in it that the council had been acting illegally in this matter.

A short discussion ensued, the sentiment of the meeting evidently being that the motion was one of censure on former councils, and practically amounted to charging them with a misappropriation of funds. Dr. McLaughlin offered to withdraw his motion, but his opponents would not at first permit him to do so.

On motion of Dr. Bray, seconded by Dr. Rosebrugh, a report was read from the Committee on Complaints correcting a statement that had

appeared in the press to the effect that Dr. Olmstead, of Caledonia, was charged with unprofessional conduct. What had been referred to the committee was merely a report from the prosecutor in connection with some circulars, which had not in any way reflected upon Dr. Olmstead.

THE FINANCE REPORT.

The consideration of the Finance Committee's report was then resumed in committee of the whole, the discussion being taken up on similar lines to that of the afternoon. Dr. Roome supported the proposed assessment, on the ground that the money was necessary to the college, and was not a hardship upon any one.

Dr. Sangster pointed out the great importance of the question, and the danger of a wrong decision. He and those with him in this matter opposed the tax because it was unjust, taxing one branch of the profession and leaving another, equally protected, to go scot free. It was also an unnecessary tax.

Dr. Williams replied, reiterating the statement that the debt, being statutory, was a just one, and should be paid. The statute was in the hands of the council, and it was their duty to administer it. Dr. McLaughlin assailed the tax, saying that it was not right that the expenditure should be controlled by a body of which almost half were not responsible to the profession. Dr. Campbell argued that the tax had been endorsed by the profession, and Dr. Moore maintained that the tax was perfectly legal. The discussion was continued by Dr. Barrick, who argued that the money was necessary in order to meet the obligations of the college, and by Dr. Britton, who disagreed with the estimate of expenses submitted by Dr. Armour. He did not think it adequate, and he urged the unadvisability of selling the building at present. He was willing to pay the tax, and hoped it would be enforced, so that no member would be exempted from it. Dr. Henry strongly supported the tax, as being necessary in order to meet the financial requirements of the council. After some further discussion the clause was carried without division. The clause regarding the prosecutor's salary was carried. This means the reappointment of Mr. Thomas Wasson with an increase of \$200 per annum. The clause providing that all examinations he held in Toronto was struck out. The other clauses of the report passed with little discussion, and the report was adopted, an amendment to strike out the "assessment clause" being defeated by 22 to 5. An amendment to the effect that the building be offered for sale by tender was also defeated by 21 to 6.

Thursday, June 27, 10 a.m.

Dr. Thorburn gave notice of a motion that hereafter tenders for printing and supplies be asked for before any contracts involving the expenditure of money be made. Dr. Sangster gave notice of a motion to amend

the by-law fixing the salaries of the registrar and treasurer. Dr. Barrick gave notice of a motion that in future copies of the estimates be placed in the hands of each member of the council. Dr. Barrick gave notice of a motion that the report of the Printing Committee be reconsidered.

It was recommended that no action be taken to extend the winter sessions from six to eight months, in lieu of the summer sessions, till all the teaching bodies had been heard from.

At the afternoon session Dr. Barrick moved that the report of the Printing Committee be reconsidered. The motion was lost. The second part of the educational report was then received. The council then went into committee of the whole to deal with the latter clauses of the first half of the educational report. There was a protracted discussion over the clause dealing with changes in the matriculation, which read as follows :

"It is recommended that the existing requirements for registration of matriculation, as set forth in clause one, section one, of the regulations for 1894-5, as per annual announcement, shall cease to be accepted on and after November 1st, 1897, and that instead of the said clause the following shall be substituted :

"Every one desirous of being registered as a matriculated medical student in the register of this college, except as is hereinafter provided, must, on and after November 1st, 1897, present to the registrar of the college the official certificate of having passed the departmental pass arts matriculation examination with not less than second-class honors in each of the following subjects : English, physics, chemistry, botany, and zoology, or, in lieu thereof, an official certificate of having passed the departmental pass arts examination, and, in addition thereto, a certificate of having passed, not sooner than in the ensuing year, the arts examination held at the end of the first year of the university course by a recognized university ; the second and third clauses of said section to remain in force."

Dr. Britton, in presenting the report, stated that the members of various educational establishments had expressed approval of the higher standard, and that it was on that ground that it should be considered, and not on the ground that it would operate to the exclusion of candidates. He carefully explained the various points of the proposed change in the curriculum.

Dr. Campbell thought that the opinion of the Education Committee was deserving of great consideration, but there was no doubt that an impression was abroad that the raising of the standard was solely for the purpose of closing the doors of the profession still tighter. Indiscreet expressions with regard to overcrowding had been made, and it was undesirable to go faster than public opinion. He moved that the clause be

struck out, and the following inserted : " That it is not expedient at present to make any changes in the matriculation." The remarks of Dr. Campbell were endorsed by Dr. Shaw. He stated that they were practically adding a year to the course, and that the change was too radical.

Dr. Sangster thought the question of elevating the matriculation standard was one of the most important to be considered. Many interests had to be considered, and the report was necessarily somewhat in the nature of a compromise.

The amendment was lost, and the clause adopted by a large majority.

The clause of the report stating that any action of the council dealing with the question of lodge practice would be *ultra vires* was carried after a brief discussion, as also was the clause recommending that the registration fee be not raised from \$20 to \$50.

The following changes were recommended in the Board of Examiners : H. Howitt, Guelph, *vice* A. A. Macdonald ; A. B. Welford, Woodstock, *vice* W. Burt ; H. T. Williams, London, *vice* W. J. Mitchell ; C. V. Emory, *vice* D. O. R. Jones ; D. J. Sinclair, *vice* C. E. Jarvis.

When the council resumed, the report, as amended in committee of the whole, was passed.

The report of the Discipline Committee was introduced by Dr. Bray, recommending an investigation by the committee into the conduct of Dr. C. Parsons, of Coe Hill ; Dr. H. O. Martin and Dr. J. F. Danter, of Toronto. The report was adopted.

THE ANNUAL TAX.

A by-law to reimpose the yearly assessment of \$2 was introduced by Dr. Rogers. He spoke at some length, pointing out that no other adequate means could be employed for the raising of the necessary revenue.

EVENING SESSION.

At half-past eight the council resumed business. A resolution was moved by Dr. Thorburn that tenders should be called for in cases of supplies required, and that the lowest tender be accepted, all other things being equal. The motion carried.

Dr. Roome introduced a motion to the effect that the college building be placed in the hands of the Property Committee, to be sold when a satisfactory sale can be effected. After a short discussion the chairman ruled the motion out of order, as amending a clause in the Finance Committee's report, which had already been adopted.

Dr. Rogers then resumed his address on the by-law relating to the annual assessment. He continued his explanations with regard to the amendment to the Medical Act and the causes which led to it.

He contended that there was nothing in the least offensive in the amendment. With regard to the provisions of the new by-law, he pointed out that under its provisions a name could not be removed from the register for nearly eighteen months, and that should a defaulter in dues be suspended he could at once obtain reinstatement by payment of dues. The real cause of trouble was that in forwarding a copy of the amendment to all the medical practitioners the substitution clause relating to reinstatement was omitted through a printer's error, and, in consequence, great misapprehension arose. He read a letter from the solicitor of the council in 1890, showing the great difficulty and expense experienced in collecting arrears in fees from practitioners, and recommending that no suits be entered in future. The council was face to face with a very serious financial condition, and nothing but the reimposition of the assessment would be of any help.

Dr. Cameron did not think that so gloomy a view of the financial position of the council should be taken, or that there was any necessity for the imposition of the proposed tax. The outstanding indebtedness of the council was not as great as in 1891. He thought it was hardly the province of the present council to levy a tax for 1893 and 1894, when another council was administering the affairs. With regard to the collection of outstanding accounts, he thought Dr. Rogers had changed his opinions in 1893 and 1894. He at that time expressed the opinion that nothing should be done to coerce the profession. He (the speaker) believed that the passing of the by-law would be taken as a declaration of war by nine-tenths of the medical profession.

Dr. Thornton said that an inspection of the finances showed something radically wrong.

Dr. McLaughlin spoke of the extraordinary powers vested in the council, and the great danger of their misapplication.

Dr. Logan objected to strictures which had been passed on the homœopathists. Should the homœopathists be compelled to separate themselves from the council, he hoped that body would assist them to obtain powers from the legislature to form a Homœopathic Council on the same lines as the present council.

Dr. Sangster congratulated Dr. Rogers on his many-sidedness. The address delivered by that gentleman had been so long and rambling that it was difficult to pick out any one point to deal with. He thought the council should have honestly admitted that they had been led into a disastrous speculation, and should have appealed to the generosity of the profession to help them out of their difficulty. The profession generally were willing to condone the errors that had been made, but if any coercive legislation were attempted there would be a revolt, and the legislature would again be appealed to.

The adjournment of the debate on the by-law was then moved by Dr. Williams and carried.

The report of the sub-committee dealing with salaries was next considered in committee of the whole. Under its provisions the members of the council and the Discipline Committee will receive an allowance of \$12.50 a day and mileage of four cents a mile ; members of committees who sit while the council is not in session, \$8 a day and the same mileage ; Board of Examiners during oral examinations, \$12.50 a day and four cents mileage. The scale of fees for examining papers to remain unchanged.

Friday, June 28.

MORNING SESSION.

A short discussion took place on Dr. Roome's motion for the sale of the building, which ended in its withdrawal.

Dr. Williams resumed the discussion on Dr. Rogers' assessment by-law. He said that surely the principle of this matter had already been sufficiently discussed. In order to get down to a practical consideration of the by-law, he moved the previous question, which was carried, and the council went into committee of the whole. A number of clauses were carried without much discussion, but a debate arose as to the best means to be devised to collect the assessment. Dr. Barrick and others spoke in favor of endeavoring to collect the money, at least during the next twelve months, by voluntary action of the medical men, and not by coercion. Nothing could be gained by the enforcement of a penal clause, and it was above everything else advisable that the various parties in the council should sink their differences and try to effect the collection of the fee without friction among the members of the profession.

Dr. McLaughlin commended the words that had been spoken concerning the necessity for peace, but he objected to the idea that he and others who had refused to pay the tax had no right to sit in the council. They had as much right as a citizen would have to complain of road improvements, for instance, which he thought were badly constructed.

Dr. McLaughlin, continuing, said he was sorry that words had been uttered in the council which would have a bad effect. It had, for instance, been said that men who did not pay the tax were dishonest. There were 1,200 men on the list of delinquents, and the word must apply to them all.

Dr. Rogers denied this. He pointed out that many of those who were on the delinquent list were there through carelessness or ignorance. It was only a very small minority who refused to pay the tax, and he did not think it fair that the great majority of the profession should pay their

just debt and that others, who chose to refuse to pay a liability which had been legally imposed, should be allowed to exercise all those privileges for which others had paid.

Dr. Sangster referred to some expressions used by Dr. Bray during the discussion, in which he had instituted a comparison between those members of the council who had paid their tax and those who had refused to pay it as offensive and in bad taste. He upheld strongly the right of himself and others to sit in the council and express their views on this matter, which were shared by many members of the profession throughout the province and in their own constituencies. He informed the council that the number of those who agreed with him on this and other matters was 1,307

Dr. Bray replied to Dr. Sangster's strictures on his conduct by commencing to read a letter signed by Dr. Sangster, and published in the *Ontario Medical Journal* some time ago, with the evident object of drawing attention to the language used in it. He was stopped by the raising of a point of order as to whether the letter had anything to do with the subject under discussion.

The council then adjourned.

AFTERNOON SESSION.

The afternoon session opened with a discussion on finances, and a committee of three members was appointed to interview the manager of the bank and see if he would accommodate the council with an advance of money sufficient to meet the expenses of the present session. The committee immediately left for the bank, and, pending their return, the council adjourned for half an hour.

The committee returned, and reported that an advance of \$4,000 would be made by the bank, on condition that the penal clause was inserted in the by-law, providing for the enforcing of the annual assessment. No increase over the present liability of \$7,000 could be obtained except on this condition. The report was adopted, and the council resumed consideration of the by-law in committee of the whole.

Dr. Williams moved an amendment to the clause in the by-law which provided that non-payment of the annual fee should be followed by suspension until it was paid. His motion was that the operation of the clause should be suspended until June 1st, 1896, and that it should then come into force, in case the bank liabilities of the council were not by that time paid. This was a compromise motion, and was carried through committee without discussion. On motion of Dr. Williams, an additional clause was inserted in the by-law, instructing the registrar to forward to each medical practitioner a copy of the by-law, together with a circular

letter explaining that the fee had been reimposed, and calling his attention to the clause by which the operation of the penal clause was suspended until next June. The by-law was then read, and reported with amendments to the council.

On a motion for the adoption of the by-law being put, Dr. McLaughlin moved an amendment striking out the first clause, thus practically killing the by-law. The ayes and nays were taken, only the territorial and homœopathic members being allowed to vote. The amendment was lost on a vote of 18 to 4, those who voted for it being Drs. Armour, McLaughlin, Sangster, and Thornton.

Dr. Armour introduced an amendment striking out the portion of the by-law which brought the penal clause into effect. This was lost on division by 17 to 5, the minority being composed of the four members already named with the addition of Dr. Reddick. The by-law was then passed and read a third time.

Dr. Harris, the president ; Dr. Rogers, the vice-president ; and Dr. Campbell, were appointed as the executive of the council for the present year.

This concluded the business of the annual meeting, and the council adjourned at five o'clock.

Meetings of Medical Societies.

ONTARIO MEDICAL ASSOCIATION.

(Concluded from last issue.)

REMARKS ON APPENDICITIS, WITH REPORT OF A CASE OF RECOVERY IN A PREGNANT WOMAN AFTER RUPTURE OF THE ABSCESS INTO THE GENERAL PERITONEAL CAVITY.

Dr. T. K. Holmes, of Chatham, read a paper with this title. He said that the treatment of this disease during this past few years was passing from the hands of the physician to the surgeon's hands. Murphy, of Chicago, operates on every case. White, of Philadelphia, declines to operate where general septic peritonitis with paralysis has supervened, and in many cases of first attack. Treves has somewhat similar views. The essayist said that of forty-nine of his cases, eight had died from rupture of the abscess into the peritoneal cavity; four from general septic peritonitis; sixteen had been operated on, with one death four months after the operation. Twenty-one recovered without operation, but five of these still have some tenderness at McBurney's point, and were, doubtless, still in danger. He thought it might be fairly estimated that of the twenty-one cases of apparent recovery, not more than one would have died had they all been operated upon; and it was about as certain that of the twelve who died without operation, eight could have been saved by timely interference. This would have made the mortality about ten per cent., instead of twenty-five. The surgeon who operated on every case escaped a great deal of perplexity and disappointment, as every one would admit who had had an apparently favorable case suddenly die from rupture of the abscess into the general peritoneal cavity, or from the development of septic peritonitis. The essayist then gave the history of the case, the events of which are summarized in the title.

Dr. Atherton said that such cases as Dr. Holmes had reported were very rare, especially in the pregnant. Some authorities had recommended that where appendicitis occurred late in pregnancy, that pregnancy should

be terminated at the time of operation. If all cases were operated upon, there would be a larger percentage of recoveries; but as many cases recovered without operation, and there was danger when done by the inexperienced, most medical men would hesitate before attempting it.

Dr. Howitt said it was difficult to diagnose appendicitis in its early stage from typhlitis. In typhlitis an operation was seldom or never required. If symptoms of pus were present, operation should be done at once. In his practice intestinal paralysis was a rare occurrence.

Dr. Jeffries, of Lindsay, said that he had probably had one hundred cases of appendicitis, the majority getting well.

Dr. A. McKinnon, of Guelph, thought Dr. Holmes was teaching one thing and practising another when he had operated on a case of suppurative appendicitis, and stated that it was useless to do so, as they were hopeless. To every patient it should be explained (if suppurative appendicitis be diagnosed) that he will die if left alone. Bold operation, and pure cleansing of the peritoneal cavity, with drainage, might save the patient. The difficulty was to decide when to operate, not when not to operate. He referred to a case he had been called to see where the patient had awakened one morning with pain in the abdomen and vomiting. The pulse was normal. Twenty-four hours after the pulse was 120, temperature 103°, and the abdomen distended. On opening a large abscess was found which had opened with the peritoneal cavity. The operation was done just in time to save the patient's life.

Dr. Holmes, in replying, said that he repudiated the idea of preaching one doctrine and practising another. By suppurative appendicitis, he meant a condition in which the whole peritoneal cavity had undergone an inflammatory process with pus formation. In such a case he did not believe there was any use in operating.

On motion of Dr. Holmes, seconded by Dr. McKinnon, Dr. J. J. Cassidy's paper, "Metallic Sutures in Fracture of the Patella," was read by title.

Dr. Mitchell, of Enniskillen, reported a case of

SEPTICÆMIC POISON RESULTING FROM A SMALL WOUND.

The left femoral vein became thrombosed, and extensive cellulitis set in, followed by suppuration. The leg was enormously swollen, and covered with a number of blebs ecchymotic spots. Free incision was made, and milk, whiskey, iron, and quinine given plentifully. At the end of the third week the patient had a peculiar nervous attack, nearly all the muscles of the body taking on tonic and clonic spasms, which seizures lasted about a week. Recovery followed.

WEDNESDAY EVENING.

Dr. T. F. McMahon read a paper on

CALOMEL FUMIGATION IN THE TREATMENT OF LARYNGEAL DIPHtheria.

He referred to the frightful mortality under the old methods of treatment, even intubation or tracheotomy saving but 20 to 30 per cent. of cases in average epidemics. He thought it yet too soon to fix the value of the anti-toxin treatment, and described at length a method first used by Dr. Cortsin, of Brooklyn, in which calomel was burned under a tent, and the fumes inhaled by the patient. Dr. Cortsin, in his first paper, reported 30 cases, 25 of which recovered. Later, Dr. Maddren reported 505 cases (in the practice of 76 physicians), of which 54.5 per cent. recovered. The experience of Dr. Andrew Eadie, of Toronto, was then related. He gave a history of 11 cases, with 9 recoveries, 6 without intubation, and 3 with it. Dr. McMahon had 9 cases of severe type, 5 recovered and 4 died. None of the deaths were due to laryngeal stenosis.

Dr. Sheard's experience at the Isolation Hospital was next related. Sixty-two cases were treated with calomel and 43 recovered, not one of which was intubated. The death rate from laryngeal diphtheria previous to the use of calomel treatment was about 70 per cent. in spite of intubation. In 82 cases in Toronto treated with calomel there were 57 recoveries, or about 70 per cent.

Dr. McMahon was quite sure that he had seen cases recover which would inevitably have proved fatal under any other plan of treatment, and he thought a practitioner was no longer justified in neglecting its use in laryngeal diphtheria. It often rendered intubation unnecessary. The method of using and dosage were then described at length, and the general management of the cases touched upon.

Dr. W. J. Wilson, of Richmond Hill, opened the discussion on diphtheria. It was, he said, a disease of childhood, when glandular activity is greatest and nasal secretions are copious and likely to be retained. Secretions of enlarged tonsils and gastric catarrh were predisposing, the former often being the point of attack. The pseudo-membrane consisted of necrotic epithelial cells laden with Klebs-Loeffler and other bacilli, the former not penetrating the tissues as the latter do, but exerting their malevolent influence through the system absorbing their toxins. Glandular enlargement was most marked when the nasal chambers were involved, by reason of their increased vascularity and lymph supply. The poison often produces a hyaloid degeneration of the capillaries, a manifestation of which is nose bleeding, a dangerous symptom; albuminuria may also be present. The heart muscle also suffers, and operations should not be delayed till dilatation takes place. The essayist discussed the various

therapeutic measures in common use. If antitoxin would stop the formation of toxins in the blood, it would be useful in addition to the local treatment. Other forms of treatment should not be neglected, even when antitoxin was being used. The doctor described minutely the method of treatment by calomel fumigation in laryngeal cases. The child is to be covered by a tent. From fifteen to sixty grains of pure calomel are heated over a lamp and vaporized slowly; repeated every two or three hours. Sometimes in a severe case as much as 5,000 grains have been used. The child's skin should be covered to prevent a deposit of the drug on the skin. The mouth and teeth should be cleansed after each fumigation, and if the gums be spongy an astringent wash should be used. The doctor discussed the comparative merits of intubation and tracheotomy.

THE PRESENT POSITION OF ANTITOXIN IN THE TREATMENT OF
DIPHTHERIA

was the subject of an address by Dr. Chas. Sheard, of Toronto. It dealt with the use of the new remedy in the Isolation Hospital, Toronto. A bacteriological examination was made in every case, not only at the time of admission, but also from time to time during the illness. The doctor then quoted statistics covering the months of February, March, April, and May. In concluding, he said he had yet to be convinced of the real value of antitoxin in diphtheria. It was to be remembered that many cases were of mixed infection, streptococci being present upon whose toxin the serum would have little or no effect.

Dr. Fotheringham referred to two throat cases (two brothers) he had seen, both of which at first seemed recovering from what had been diagnosed, and what seemed simple tonsillitis. The younger boy went on to recovery, but the other developed an attack of true diphtheria of the laryngeal type, as shown by a bacteriological examination. The doctor's theory was that, at first, it was a case of mixed infection, the diphtheria germ getting the upper hand of the others and true diphtheria developing, which in its earliest stage was much less malignant than it turned out to be later.

Dr. Holmes, of Chatham, said that the late Dr. Tye and he had kept a record of their cases of diphtheria for several years, and had found the death rate to be about twenty-five per cent. Last year, in an epidemic in the town, the mortality was about the same. Since the era of antitoxin he and his partner had used it in twenty cases, not one of which had died. The experience of the other Chatham physicians corresponded with this.

Dr. McPhedran pointed out that a large number of acute clinical observers on the continent had reported favorably on the new treatment. Even in conservative England reports were very favorable. The treatment was especially successful in early cases. It would require several

epidemics before its value could be definitely settled. No doubt it would be proved that only in those cases in which pure cultures were obtained would the serum be a success. From the hospital reports he considered the dosage had been insufficient. The speaker then referred to his own experience, which was favorable to the antitoxin.

Dr. Wilson, in reply, said antiseptics were valuable, and should be used right through; if they did not kill the germs, they would lessen their vitality. He thought, until the antitoxin had been tried by many different observers the world over, they could not come to a definite conclusion as to the value of the remedy.

Dr. H. A. Macallum, of London, read a paper on "The Physiological and Therapeutic Action of Iron, with a Discussion of its Newer Pharmaceutical Compounds."

LARYNGEAL AND TRACHEAL TUBERCULOSIS: THE IMPORTANCE OF THEIR EARLY RECOGNITION AND TREATMENT.

Dr. W. F. Chappell, of New York, read with this a little paper. The essayist, after referring to the difficulty of relieving this disease, spoke of the necessity there was for early diagnosis to ensure success in the treatment. He pointed out the two varieties—the acute, which was usually primary, and the chronic, or secondary. He detailed the symptoms, objective and subjective, in the diagnosis. The progressive character of the pain and the excessive secretion of frothy mucus, in pulmonary cases, were diagnostic. Hoarseness was another important sign. The characteristic local conditions distinguishable with the laryngoscope were described. The infiltrations were most common in the inter-arytenoid space. (A water color was passed around illustrating the condition.) The various forms of treatment were then gone fully into. That upon which most emphasis was laid was one used first by the reader—the submucous injections of creasote. The doctor then described the technique, and showed the instruments used and the mixture. His conclusions were that (1) every case of pulmonary tuberculosis should be carefully watched for laryngeal symptoms; (2) in profuse pulmonary expectoration a spray of creasote should be used; (3) no case should be abandoned to cocaine and other sedatives until all the other methods have been tried; (4) tubercular infiltrations and ulcerations may be arrested; (5) rest, nourishment, and creasote internally should be used as a constitutional treatment; (6) if the disease is arrested, the patient should be placed under the most favorable climatic influences.

Dr. Ryerson said he was pleased to hear of the new treatment for this most obstinate complaint. As to curettement, he thought it should only be done by skilled hands.

Dr. Palmer said he had had no experience in that special form of treatment, but it was something to which the profession should pay the utmost heed.

Dr. Price-Brown said these cases were not diagnosed early enough. When they came into the hands of the specialist, they were often too far advanced to receive much help. He had tried curettement and the galvano-cautery.

Dr. D. J. Wilson asked as to the action of creasote, administered in this way, whether it acted merely locally or constitutionally as well.

Dr. A. Primrose, of Toronto, presented a series of stereopticon views of sections through the body in various planes, showing the relations of the organs in the various regions.

Dr. A. K. Sturgeon, of Petrolea, read a paper on "Hydrotherapy in the Treatment of Exanthematous Fevers."

Dr. Playter contributed a paper (read by title) on

HOME AND FOREIGN CLIMATES IN CONSUMPTION,

mostly extracts from a book on consumption now in the printers' hands, in which he contends, and quotes authorities to prove, that, in the present state of our want of knowledge of the effects upon the human functions of the various atmospheric conditions, change of climate is an empirical remedy having no theoretical foundation, and that acclimatization is a process, the possible injurious effects of which will often outweigh any benefit derived. In hardly one case in a hundred is such a change desirable, although change of locality is often essential.

A warm climate sometimes gives more comfort and prolongs life in advanced cases; and occasionally, in the early stage, a young man indifferent about his health may be sent to an elevated climate.

Theory and practice have taught us that what the consumptive needs, first, last, and always, is more pure air, or more oxygen, and this in its best, most invigorating form. This cannot be best supplied by a warm nor by a thin atmosphere. The consumptive, whether from heredity or habit, is an imperfect breather. In the development of the soil for the tubercle bacillus, imperfect respiration plays the chief part; all other causes are but remote and contributive to this one—an imperfect respiratory function which clogs the entire organism with the debris of imperfect tissue metabolism, from want of oxygen.

In the decomposition of this accumulated effete matter, not only are inorganic substances formed which constitute food for the bacilli, but possibly also organic toxines, which transform simple saprophytic bacilli into poisonous or virulent pathogenic organisms or infections; the analogue of which we sometimes have in the transformation of the bacillus coli communis by intestinal toxins.

In the rarefied air of high mountains, with the climbing, there is great and forced expansion of the lung membrane. The subject actually gasps widely for breath in order to compensate for the thinness of the air. The whole function of respiration is aroused and improved, and the body purified and invigorated. But altitude is not necessary. This function can be more readily improved at the lower levels with the "richer" air of Canada by suitable lung gymnastics, if the patient will only persevere in the exercises; and more safely, too, in hæmorrhagic cases, in which there is considerable risk in going somewhat suddenly to a much elevated climate.

Dr. Playter refers to the benefits of compressed air, and of the dense air at sea, where the mortality from consumption has been (is) shown to be sixteen times less than on land; a result not attributable alone to the purity of the sea air.

The purer air of great elevations is an important condition. Yet we have in many parts of Canada a practically pure, highly ozonous atmosphere, at all seasons; while over our snow-covered expanses during several months of the year is air probably as germless as on sea or high mountain. The colder the air breathed the more oxygen it contains, and the more, too, it expands in the air chambers on becoming warmed to the lung temperature. Consumptives in Canada, in nearly all cases, have acquired the predisposition by means of indoor occupation or a habit of housing in close, overheated rooms, and they may be, the most susceptible of them, gradually habituated back again to an outdoor life, even in the coldest season, by proper attention to the skin, suitable clothing, and, especially, the cool bath. The sudden changes in temperature in Canada, although trying, are invigorating, and often less marked and sudden than on high altitudes. At Davos, the thermometer has shown a "drop" of 150° F. (from 166° to 16°) between the midday sunshine and the following night.

Dr. Playter contends that we have in Ontario and Quebec some of the best localities for consumptives on this planet. Muskoka has a reputation as a good one. It is sufficiently elevated, has a dry, pure, and invigorating atmosphere, and a large proportion of sunny days. The ideal place, the doctor thinks, is on the Gatineau Mountains, a few miles from Ottawa, in about the same latitude as Muskoka. With a pure and highly-bracing air, and a large number of sunny days, it has a southeastern aspect, and protection on the northwest by a much more elevated wooded ridge; and is hence suitable for all seasons. It has a delightful outlook, with a view of about 4,000 square miles of beautiful country—the Ottawa, Rideau and Gatineau rivers, their valleys, windings, and waterfalls, and the beautiful capital of the Dominion at the meeting of the three waters.

SOME UNUSUAL CASES IN PRACTICE.

This was a paper by Dr. George Acheson, Galt. The first case was that of double cephalhæmatoma, with enlarged thyroid occurring in a second confinement after forceps delivery, with recovery. The second was a case of leucoma in a woman, occurring on the inner side of the lower jaw and floor of the mouth, resulting, probably, from the irritation of a badly-fitting tooth plate. The third was a case of retro-pharyngeal abscess, complicating capillary bronchitis in an infant five months old. The patient was at death's door before the diagnosis was made, but after the condition was recognized and the abscess opened recovery soon followed. The fourth was the occurrence of an atheromatous congenital cyst in the neck, developed in connection with the fourth branchial cleft. Dissection of the whole cyst was performed after evacuation had failed. The next case related was one of complete and persistent loss of sight in one eye, following an attack of dacryocystitis with stenosis of the nasal duct. The last was a case of membranous colitis in a girl aged three and a half years, cured by attention to diet, washing out the bowels with a solution of copper sulphate, gr. ii. to the ounce, or distilled hamamelis half strength, and perchloride of mercury and syr. phos. co. internally.

Dr. Machell spoke of the diagnosis of the cases of cephalhæmatoma. Most of them got well if left alone. Regarding colitis, he had found they were likely to recur upon the least indiscretion. They were very difficult to treat to get an entire cure. They required constant daily attention. Copious injections of warm soft water, borated, often acted beneficially.

Dr. Peters said, in regard to post-pharyngeal abscesses, the opening should be made very free. He referred to a case of leucoma on the inside of the cheek which he had operated upon. The man had been a tobacco chewer, which may have had something to do with the causation.

Dr. J. H. Burns introduced Mr. Warring Kennedy, Mayor of Toronto, who made a short address to the members of the association.

NEPHRECTOMY.

Dr. L. McFarlane then read a paper on nephrectomy. He related the history of a case. The patient, aged 30, who had had gonorrhoea a few months previous, some four months before operation felt pain in left lumbar region, which disappeared and extended to the right, and then to the mesogastric and hypogastric regions over the tumor. Evening temperature rose to 102°. The tumor was tender, and painful at nights. Could be felt per rectum, and fluctuated. The urine was acid, and contained albumen and pus. An opening was made, and a large quantity of pus evacuated. The sinus failing to heal, the kidney was removed. A renal calculus was found in the ureter. The patient made a good recovery.

CHRONIC SEMINAL VESICULITIS.*

This was the title of a paper by Dr. Edmund E. King, of Toronto.

Dr. Peters said he did not see how the deep urethral injections spoken of by Dr. King could reach the seat of disease.

Dr. B. Spencer related the history of a case he had under his charge, where he had tried the line of treatment laid down by the reader of the paper with success.

ANTITOXIN IN THE TREATMENT OF DIPHTHERIA, WITH CLINICAL NOTES OF CASES.†

This paper was presented by Dr. J. D. Edgar, of Hamilton.

Dr. Stowe-Gullen related some observations she had made in some of the diphtheria hospitals while abroad. It was necessary for the best results that the cases should be seen early. In France, the mortality had been large until the introduction of antitoxin. She then described the method of injection. She pointed out that the children there were much harder than those in America.

Dr. G. A. Bingham read the history of two cases of

MOVABLE BODY IN THE KNEE-JOINT.

In the first the body was removed under cocaine anæsthesia. The synovial membrane was stitched up with fine catgut, and the superficial wound with silkworm gut. Perfect recovery followed. In the second case the body was removed under chloroform. Suppuration followed, probably accounted for by the cachectic condition (perhaps specific) of the patient. The reader of the paper then gave Barwell's views as to the pathology in these cases, and stated that in his experience this condition was most often found in those with some cachexia. Where there was a gouty, rheumatic, tubercular, or syphilitic tendency, he would pursue a course of constitutional treatment before operating. The points to be specially observed in operating were: Rigid asepsis; refraining opening sac until the body is isolated and controlled; the smallest possible opening in the sac; closure of deep wound by independent absorbable sutures; fixation of limb after operation; voluntary decision of patient after due consideration of possible dangers.

Dr. Shepherd, of Montreal, said he thought many of these cases were congenital. He did not think cachexia had anything to do with them. He had never seen a case in a woman. He had met with a number of these cases, but had never had any serious results. Suppuration was usually indicative nowadays of some fault in the technique.

* See page 495, July issue.

† Will appear in THE CANADIAN PRACTITIONER.

Dr. H. T. Machell read the history of a case of "Infantile Scurvy."

The patient was eleven months old. He said the first symptom noticed was an inability to use the legs and feet as well as usual. Pain was noticed about the hip-joint. The baby had not lost flesh. It had been weaned five months, and had been fed on oatmeal gruel. About a week before the doctor saw the patient the mother had noticed a reddish blush on the right ear about one inch in diameter, and a few petechiæ between the knees and ankles. In a week symptoms were exaggerated, and the gums of the upper four incisors were swollen and purple. A shiny appearance was noticed on the skin of the lower part of the thighs and legs. Upon a diet of grape juice the child began to improve, and in five days the swelling and tenderness of the legs disappeared, and the gums were perfectly normal two days later.

Dr. Shepherd said this disease was not confined to the poor, but in the children of the rich as well. He had seen a good many cases. Under suitable diet the cases did well.

Dr. Gibson, of Belleville, read the history of a case of

EXTRA-UTERINE GESTATION.

Prior to the operation the woman had suffered from peritonitic attacks. When seen by the essayist in consultation the temperature was $99\frac{1}{2}^{\circ}$; pulse, 125. Patient was in distress from flatulence. The tumor filled the pelvis, and was tender and fluctuated. There had been no flow, nor passage of decidua, and the breasts were not enlarged. The uterine canal was patent. Aspiration was done twice, with some improvement. On subsequent examination movements were observed suggestive of foetal life. On opening, the sac was found to be free, but, being friable, it ruptured, the contents escaping into abdominal cavity. On removal of the foetus there was tremendous hæmorrhage, which was with difficulty stopped. Recovery followed.

MENTAL ABERRATION FOLLOWING REMOVAL OF OVARIAN CYST.

This was the title of Dr. Gibson's second paper. He related the history of the cystic trouble, the main points in the diagnosis, and the various steps in the operation. Adhesions were very numerous. A good recovery followed; but it was noted on the sixth, seventh, and eighth days that the patient was at times talking foolishly. On the tenth day she became quite unmanageable, and, in spite of the nurse's efforts to restrain her, she got out of bed alternately screaming and muttering. Recovery followed in a few days.

Dr. Oldright detailed the history of two cases he had *seen* operated upon.

Dr. J. F. W. Ross reported having had several cases of mental aberration following removal of simple ovarian tumor. In one case the patient not only became insane, but died. He thought it might be attributed to the use of iodoform or long-continued suppuration of the pedicle.

Dr. J. F. W. Ross then read a paper on

EXPERIMENTAL SURGERY ON MAN AND WOMAN ; A CRITICISM OF OPERATIONS DONE AND THE RESULTS ATTAINED.*

He said that since the introduction of antiseptics much of the surgery had been experimental in its nature. Owing to the ability of the surgeon to perform major operations, many unnecessary operations would be done. He pointed out that statistics of reports of cases as found in medical journals were very unreliable. Many coeliotomies done for relief of pelvic conditions would be better left undone. He preferred as a guide to the modern young woman one of the old-fashioned practitioners and the common-sense mother, by whom pelvic massage, one of the most revolting of modern medical procedures, would be tabooed. The uterus and the ovaries would be kept in the pelvis, and would not be permitted to migrate to the brain.

Oophorectomy for fibroids he had found to be a successful procedure ; it had taken the place of hysterectomy. Hysterorrhaphy and nephrorrhaphy he considers useless, and perhaps harmful. For cancer of the pylorus in patients much emaciated, where life could only be prolonged a short time, he would not advise removal or intestinal anastomosis. The doctor considers that it would be just as sensible to take out the bladder or rectum as to remove the uterus for the relief of pus tubes. He holds that it is easy to remove adherent ovaries and tubes and adherent uterus through the vagina, and that it is much easier to remove healthy ovaries and tubes through the vagina than through an abdominal opening. The doctor uses the term so-called gynecological surgery, and says that practitioners will soon be afraid to recommend a consultation with a specialist. After decrying the constant operations for appendicitis, the doctor, in conclusion, said that he felt satisfied that within the next ten years the waters of the great surgical flood that has swept over this continent and the continent of Europe will fall and regain their normal level.

Dr. Oldright said he would join issue with Dr. Ross in regard to operations on the breast and intestines. Where operation would give a couple of years' pleasant life, instead of a miserable existence, he thought it wise to operate.

Dr. Cronyn, of Buffalo, said he had watched the transitions of views on many surgical questions, and he felt sure that conservative surgery would

*See page 566.

take the place of experimental surgery in years to come. For twenty-six years he had done every possible operation. He had never had a case of sepsis. He always kept his hands clean, and cleaned his instruments himself.

Dr. Shepherd said he agreed that many members of the profession were suffering *pruritus operandi*. In olden times a surgeon had to have something more than technical skill; now any man who had learned the technique thought he could operate, even though he could not diagnose the case or knew not when to operate. The speaker did not think diagnosing was nearly so accurate now as it was years ago. Now surgical technique was in excess, and surgical judgment deficient. He did not quite agree with Dr. Ross in refusing to operate on the stomach. He had operated several times, and the patients were considerably relieved; and frequently died from some other affection.

In regard to mental aberration following operations on the ovaries or uterus, he fancied the anæsthesia or iodoform had something to do with it, together with some hereditary mental taint.

The association then adjourned to the Royal Canadian Yacht Club, where the out-of-town members were entertained to luncheon by their city brethren. Toasts to the Queen and the Ontario Medical Association were drunk; and the guests drank the health of the hosts. A most enjoyable cruise in the steam yacht, *Cleopatra*, was then taken before resuming business.

THURSDAY AFTERNOON.

Dr. J. Campbell, of Seaforth, read the first paper. Subject:

PHLEGMASIA DOLENS.

It consisted of the report of two very interesting cases. We quote the doctor's conclusions regarding the cases:

(1) The swelling of the legs in both cases began at the periphery. The first lost power of the limb; the second did not. (2) Both veins and lymphatics were involved in both cases, the veins being inflamed, the lymphatics being obstructed. (3) The phlebitis was produced by the precipitation of the fibrin by the action of the septic agent, which had been either developed in the blood or had made its way into the fluid. (4) The predisposing cause in the first case, besides the hypernestic state of the blood in all pregnant women, was the varicose veins. (5) In the second case, besides the condition of the blood and a moderate varicose condition of the veins, the doctor believed that the loss of blood at the confinement was the great cause of the trouble, weakening an overtaxed nervous system. (6) The modes of death were different, the first dying from pyæmia; the second from thrombosis, producing asphyxia, from arresting

circulation in the lungs. (7) The pathology of this interesting disease was still somewhat obscure, and much as yet to be found in reference to it.

Dr. A. H. Wright said he agreed with Dr. Campbell that the first patient died from septicæmia. The second case was more like an ordinary case of phlegmasia dolens. As to the prevention of phlegmasia dolens, Dr. Wright said the same precautions should be taken as are taken to prevent septicæmia. As to treatment, he was strongly opposed to big doses of quinine, antipyrin, or phenacetin.

Dr. Harrison related the history of a case in a man, following an attack of typhoid fever.

Dr. Adam Wright said that he had tried this form of treatment in a few cases, with satisfactory results.

Dr. Graham also commended the treatment. He had tried it in a number of bad cases, but was not satisfied with its effects in them so well as in the milder cases. One thing the treatment had taught them: that purgatives could be given with comparative immunity. For high and continuous temperature, he still had more faith in the cold baths. These tended to increase the elimination of urine, and hence of large quantities of the poison.

Dr. Harrison referred to Dr. Doyle's treatment of giving 10 or 15 grain doses of calomel and copious rectal injections, by which good results had been attained in the treatment of typhoid.

Dr. Saunders doubted if these mild cases of fever which ended early on free purgation were really typhoidal. The trouble, he said, with these different forms of treatment was that often statistics were unreliable, because epidemics varied so much in character. Instead of antiseptics, he had, like Dr. Graham, more faith in external applications of cold.

Dr. McKinnon said the matter of elimination could not be ignored. In mild cases, it acted, with him, satisfactorily. In a case cited, he spoke of the drop in temperature, the improvement of the mental condition, and of the circulation.

Dr. Thistle pointed out that in the forty-two cases reported the diagnoses had been made by able men, and should not be questioned. The elimination of the poison by the liver he considered greater than by the kidneys.

Dr. Bethune said he had practised in the country 38 years, and had thousands of cases. He held that many of the cases reported as cured by the antiseptic and eliminative treatment, and said to be terminated early by the treatment, were not the genuine typhoid at all, but a malarial or bilious type of fever.

THE ANTISEPTIC AND ELIMINATIVE TREATMENT IN TYPHOID FEVER.*

This subject was presented by Dr. W. B. Thistle, of Toronto.

* Will appear in THE CANADIAN PRACTITIONER

A paper on "Science in Medicine" was read by Dr. F. Oakley, Toronto.
Dr. D. Marr read a paper on

THE TREATMENT OF PULMONARY TUBERCULOSIS.

After treating of the idiosyncrasies of the disease, the doctor said that "the generally accepted doctrine is that the primary etiological factor of tuberculosis is bacilliary. Then why does it not develop in all catarrhal inflammation of the respiratory tract?" In the doctor's opinion there exists a something, either inherited or acquired, which prevents the lodgment and growth of the bacillus of tubercle in individual cases. He then dealt with the treatment of the disease, which, he said, should have two principal objects, first, the strengthening of the tissues of the body for fighting the invasion; secondly, the neutralization and destruction of the toxic substances already generated. After treating of climatology and the physical signs of the disease, the speaker gave his course of treatment. He gives creasote at the onset in the following combination :

R. Morson's creasote..... mm 128.
Ol. Menth. Pip..... ʒss.
Spt. Chloroform..... ʒii.
Tr. Gent. Co..... ʒi.
Tr. Nuc. Vom..... ʒiiss.
Spt. Frument. ad..... ʒviii.

Sig. ʒi., three, four, or five times a day in water.

The doctor lays pressure on the fact that the creasote and Spt. Frument. should be the best obtainable.

For the cough the doctor gives the following spray :

R. Menthol..... gr. v.
Thymol.... gr. i.
Eucalyptol..... aa mm x.
Gaultheria.... aa mm x.
Phenol..... gr. iii.
Ol. Petrol. Alb., q.s. ad..... ʒi.

He claims that hæmoptysis has never been an alarming symptom under administration of the following :

Acid Sulp. Dil., Ext. Ergot. Fld., Acid Gallic, and Tr. Cinnamon.

Dr. E. H. Stafford, of Toronto, presented a paper, entitled

NOTES ON PARESIS.

The doctor said it was not until a few years ago that general paralysis or paresis was recognized by alienists as a distinct nervous disease, and for this reason the statistics of to-day, which show it to be so greatly on the

increase, may be, to a certain extent, misleading. As the earlier stadia of the affection, before admission to an asylum becomes necessary, often pass unrecognized by the general practitioner, a clearer understanding of the clinical signs of these stages has become a desideratum, and it is to this end that the present paper was read, attention being called incidentally to the helplessness of the student of psychiatry, through lacking a systematic pathological basis for the classification of mental diseases.

SPECIAL FORMS OF ULCERATION OF THE CORNEA.

The above paper, by Dr. G. S. Ryerson, M.P.P., was read by title. It dealt with the round ulcer and its chronicity; the funnel-shaped ulcer, its painfulness and tendency to perforation; the ring ulcer, surrounding the whole cornea, causing that structure to slough off; to the undermining characteristic of the rodent ulcer; and to the serpentine ulcer of Salmisch, which is often attended by hypopyon.

In cases attended by pain and irritation atropine should be used, but eserine was more beneficial in cases where there was much sloughing. The eserine should not be used in too strong solutions, one-quarter to one-eighth of a grain to the ounce being a proper strength. Special reference was made to the use of hot water in the form of a spray. The sheet anchor, however, in all serious forms of ulceration, was the actual cautery, more especially in those of primary origin.

Papers by Drs. Reeve, Sweetnam, Davison, and Teskey were read by title.

Dr. D. Campbell Meyers read a paper on

A CASE OF TRAUMATIC NEURASTHENIA,

and exhibited the patient. About a year ago the patient, a farmer of thirty years of age, was knocked down by a restive colt. He remained unconscious for a few moments, and on recovery he found that there was a super-parietal wound on the left side, with hæmorrhage, and that blood was also flowing from the left ear. The external injuries had disappeared soon, but muscular asthenia set in, accompanied by deafness of the left ear. The doctor diagnosed the case as traumatic neurasthenia, and the treatment consisted of central galvanization at first, followed by static electricity. Sodium, bromide, arsenic, ergot, and strychnine, were administered, with sulfonal for the insomnia. The patient has improved splendidly under the treatment, and is now practically a cured man.

The officers for the coming year are: President, Dr. Grasett, Toronto; vice-presidents, Drs. McKinnon, Guelph; Gibson, Belleville; Wilson, Richmond Hill; McCallum, London; general secretary, John N. E. Brown, Toronto; assistant secretary, Chas. A. Temple, Toronto; treasurer, G. H. Carveth, Toronto. Windsor was chosen as the place for meeting next year.

Book Reviews.

TRANSACTIONS OF THE SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION. Volume VII., seventh session, held at Charleston, S.C., November 13, 14, and 15, 1894. Published by the Association.

This volume of transactions is quite equal to those which preceded it. We have several times had occasion to refer to the remarkably good work done by this very vigorous society. We have much pleasure in extracting the following from the able address of the president, Dr. Cornelius Kollock, of Cheraw, S.C. : "Its (the association's) founders are earnest men, but there is one among them especially earnest, having its welfare much at heart, a hard and willing worker, an excellent operator, well known to the medical men of the South and of the North, striving for the advancement of the South, Southern in sympathy, yet catholic in spirit. This man is Dr. W. E. B. Davis, of Birmingham, Alabama, the secretary of the association." We believe this distinguished surgeon and worthy officer well deserves these words of praise. We rejoice in the prosperity of this excellent society, which worthily represents the exponents of surgery and gynæcology in the "sunny South."

THE AMERICAN ACADEMY OF RAILWAY SURGEONS. Official report of the first meeting, held at Chicago, Ill., November 9 and 10, 1894. Edited by Dr. R. Harvey Reed, Columbus, Ohio.

This little volume is replete with subjects of great interest to the profession. The first part of the volume gives a history of the organization of the Academy, etc., etc., which is historically interesting. The good work of the Academy is apparent by a perusal of the papers and discussions. We must refer to a very elaborate résumé of the question, "The best methods for approximately determining the amount of damages sustained by traumatism, from a monetary standpoint," by Dr. R. S. Harnden, surgeon, Erie Railway Co., of Waverley, N.Y. The paper shows very exhaustive research, and a careful consideration of the minor details which go to make up a personal damage. It also places the adjudication in the "law" and "claims" department of the railway, and rightly considers that the medical department should be exempt from interfering with damage adjustments. We hope the Academy will continue to prosper, and do as good work as the present report indicates. Dr. R. Harvey Reed, of Columbus, Ohio, the secretary, has spared no pains in making the volume complete and attractive.

THE DYSPEPSIA OF PHTHISIS. Its varieties and treatment. Including a description of certain forms of dyspepsia associated with the tubercular diathesis. By W. Soltan Fenwick, M.D., B.S. Lond., M.R.C.P. Lond., Assistant Physician to the Evelina Hospital for Sick Children, etc. London : H. K. Lewis, 136 Gower street, W.C., 1894.

Physicians will readily see the advantage of a work on this subject, which plays such an important part in the history of pulmonary tuberculosis. Ample proof will be found in this book to show the frequency of dyspepsia in phthisical patients, both prior to and during the disease itself.

The opening chapters are devoted to the pathology and morbid anatomy of the stomach and intestine in phthisical patients. Such frequent occurring conditions as dilatation of the stomach, chronic catarrh, irregularities of the mucous membrane, interstitial inflammation, receive due notice. The great rarity of tuberculous ulceration of the stomach, contrasted with that of the intestine, is attributed both to the antiseptic action of the gastric juice, and to the small quantity of lymphoid tissue in the wall of the stomach. The author, having described these pathological conditions, takes up the clinical side of the question, and describes in a very lucid manner the dyspepsia of strumous children, the dyspepsia which frequently precedes the development of pulmonary tuberculosis, initial dyspepsia of phthisis, and the dyspepsia of advanced phthisis. The author pays such particular attention to the dyspepsia which frequently precedes phthisis that alarm may be taken lest an intractable dyspepsia be a precursor of phthisis. However, we must remember that only a few of the great number of dyspeptics are attacked by pulmonary tuberculosis. The volume is neatly gotten up, and printed on good paper.

The following Books and Pamphlets have been received :

LECTURES ON THE SURGICAL DISORDERS OF THE URINARY ORGANS. By Reginald Harrison, F.R.C.S., member of the Council, and lately one of the Hunterian Professors of Pathology and Surgery, Royal College of Surgeons of England, etc., etc. Fourth edition. London : J. & A. Churchill, 11 New Burleigh street.

Medical Items.

DR. A. EDWARD AWDE, of Toronto, was married on June 22.

DR. and MRS. J. E. GRAHAM are spending a few weeks at Pigeon Cove, Mass.

DR. GEORGE H. CARVETH and family spent their holidays in Muskoka—at Clevelands.

DR. CHARLES CARTER, of French River, is spending a week at his home in this city.

DR. WILLIAM OLDRIGHT, who is spending the summer in Europe, attended the meeting of the British Medical Association in London.

THE American Orthopædic Association will hold its ninth annual meeting at Chicago, September 17, 18, and 19, 1895, under the presidency of Dr. John Ridlon, of Chicago.

THE American Laryngological Association held its seventeenth annual meeting in Rochester, June 17, 18, and 19, 1895, under the presidency of Dr. John O. Roe. Dr. Wm. H. Daly, of Pittsburg, was elected president for the ensuing year.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS.—The eighth annual meeting of this association will be held at the Auditorium Hotel, Chicago, September 24, 25, and 26, 1895, under the presidency of Dr. J. Henry Carstens, Detroit.

AN ECONOMIST.—“If you insist on knowing the truth, madam,” said the doctor, “your husband will not live twenty-four hours longer.” “Good gracious!” ejaculated the broken-hearted but economical wife, “and yet you have sent in medicine enough for five days.”—*Fliegende Blätter*.

THE American Electro-Therapeutic Association will hold its fifth annual meeting at the College of Physicians and Surgeons of Ontario, in Toronto, Canada, on Tuesday, Wednesday, and Thursday, September 3, 4, and 5, 1895. A most cordial invitation is extended to the medical profession to attend the sessions, all of which are open. For information as to traveling facilities, address Dr. Charles R. Dickson, 159 Bloor street east, Toronto, chairman Committee of Arrangements. Dr. Emil Heuel, secretary, 352 Willis avenue, New York City.

OBITUARY.

PROFESSOR WILLIAM C. WILLIAMSON, F.R.S., Emeritus Professor of Botany in Owens College, Manchester, died June 23, at the age of 78.

DR. HORACE P. REDNER, of Lonsdale, county of Hastings, Ontario, died May 15, at the age of 50 years. He was born in Belleville, and received his degree of M.D. from McGill in 1864.

JOHN DAVIDSON MCCONNELL, M.B.—The many friends of Dr. McConnell were shocked by the announcement of his sudden death in England, August 1st. He was attending the session of the Supreme Court of the Independent Order of Foresters, and appeared to be in good health. He left the session about 4.30 in the afternoon, and about fifteen minutes later was found dead in the lavatory. He was born at Markham in 1844, and received his medical education at the Toronto School of Medicine, graduating at the University of Toronto in 1869. He practised in Thornhill until 1882, when he moved to Toronto. In addition to his work as a physician he took an interest in politics, and was for a time an alderman. He was prominent in various societies, including that of Masonry. He was active, energetic, and enthusiastic in every work he undertook, and was especially loyal to his *alma mater*—the University of Toronto. In addition to his widow, two daughters and one son, he left a large number of warm friends in various parts of Canada.

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EDITOR:

ADAM H. WRIGHT, B.A., M.D. Tor.

ASSOCIATE EDITORS:

JAMES F. W. ROSS, M.D. Tor.

JOHN CAVEN, B.A., M.D. Tor.

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Original Communications.

TREATMENT OF PULMONARY TUBERCULOSIS.*

BY DELASKI MARR, M.B.,
RIDGETOWN.

IT is not my intention to give you a résumé of what is considered good treatment at the present time, but merely to give my own views upon this subject, in order that a discussion may be invoked which will enable me the better to cope with the many difficulties which cluster around the invasion and advancement of this disease.

Since the discovery of the bacillus of tuberculosis by Robert Koch, an impetus has been given to renewed exertion on the part of the whole medical profession, and from well-authenticated reports this exertion has not been in vain.

Tuberculosis is a communicable disease, and thus preventable, and, under certain conditions, curable. Many are the cases of healed tubercular lesions, demonstrated upon the post-mortem table, whose previous

* Read before the Ontario Medical Association, June, 1895.

history shows neither diagnosis nor treatment for tuberculosis. A good practical classification of these cases depends upon physical signs and clinical history, but these do not always correspond with laboratory examination. This fact may be accounted for partly by personal peculiarities, but this is not sufficient. For instance, one case may present a gradually increasing cough, no hæmoptysis, while fever and expectoration occur later. Physical examination shows the upper part of one lung consolidated and the opposite lung slightly affected. The usual grave symptoms appear, and eventually death ensues. Necropsy presents the familiar appearance of pulmonary tuberculosis, the disease having existed for twelve to sixteen months. In contrast with the above, I can refer to a stonecutter whose illness has lasted for years, while a third case is rapidity itself, differing from miliary tuberculosis in the fact that one lung alone is affected. These cases, though typical, cannot be said to be identical. Family history and personal environments may modify the course of the disease, but the result remains unchanged. I am of the opinion that these three cases are inflammatory in the beginning, and usually take the form of catarrhal pneumonias. This condition may be the "nidus," "favorable soil," or "culture medium," or constitute what was once called diathesis. This weakened state of the lung tissue, or susceptibility to germ invasion, has also been termed hypotrophy.

The generally accepted doctrine is that the primary etiological factor of tuberculosis is bacillary. Then why does it not develop in all catarrhal inflammations of the respiratory tract? The question of the existence of a pre-tubercular state is a much-discussed problem at the present time; but, in my own humble opinion, I am convinced there exists a something, either inherited or acquired, which permits of the lodgment and growth of the bacillus of tubercle.

The treatment I propose to present to you has for its purpose two principal objects: First, the strengthening and innervation of the tissues of the body so that the animal cells may be in such a condition as to successfully combat the invasion and increase of the bacilli of tubercle; secondly, the neutralization and destruction of the toxæmic substances already generated by the specific micro-organisms whose detericrating influence on the blood is so well marked. As regards the anti-bacillary treatment, I have nothing to say. Our experience during the last few years has taught us to be extremely sceptical in this direction, although my sincere wish is that some one may be fortunate enough to place in the hands of the general practitioner some means to annihilate both the primary and secondary causes of this most fatal disease.

Climatology is a question of such vast importance, and needs such a thorough discussion, that it cannot be but excluded from the scope of this brief paper.

The following are the physical signs which, when found, render the diagnosis of pulmonary tuberculosis comparatively easy : Prolonged, harsh, or, more frequently, tubercular expiration, sibilant or sonorous râles, moist or crepitant râles at the end of inspiration, and tubular breathing. Patient complains of a gradual loss of weight and strength, gastric difficulty, cough, expectoration, anorexia, fever, malaise, hæmoptysis, night sweats, etc. The finding of the bacillus of tubercle in the sputum is always diagnostic, but its absence does not exclude the existence of tuberculosis.

Usually the patient first seeks advice for a catarrhal dyspepsia, which has existed for some time, and to which he attributes his loss of weight and cough. This has been the rule so much in my cases that I invariably examine the lungs and take the temperature in every case of long-continued stomach difficulty. Contrary to the usual custom, I place the patient upon creasote at once. I find the following combination easily borne by the stomach :

R.—Morson's creasote	- - - -	min. 128.
Oil menth. pip.	- - - - -	min. 30.
Spts. chloroform	- - - - -	2 dr.
Tr. gent. co.	- - - - -	1 oz.
Tr. nux vom.	- - - - -	3 dr.
Spts. frumenti, ad	- - - - -	8 oz.

Sig.—One drachm three, four, or five times a day in water (wine glass full).

In the above prescription I have found two things absolutely necessary to insure success in its administration, namely, the quality of the creasote and spts. frumenti should be the best obtainable. Creasote has a direct effect upon the blood. When given after food it produces an increase in the number of leucocytes, and, therefore, better phagocytosis. Creasote, in proper doses, arrests fermentation in the stomach dependent upon the presence of lower organisms, while the digestive action of pepsin is but slightly interfered with. To describe the action of each of the drugs used in this and the following combinations is needless, and would only take up your time, which, at this meeting, is especially valuable. Thus, to shorten this paper, I shall merely give symptomatic treatment.

For the pyrexia, with no indication of diarrhœa, quinine sulphate and podophyllum, but podophyllum is replaced by pulv. opii when there exists a tendency to diarrhœa. When fever rises to 101° to 103°, a cold pack over the heart, with the administration of digitalis and morphine sulphate, both relieves the tachycardia and lowers the temperature. Morphine sulphate, at times, seems to act almost as a specific, so marked are the benefits derived from its use, while constipation is seldom, if ever,

produced. When the pyrexia becomes excessively high, guaiacol, used externally, lowers the temperature by inhibiting the production heat by direct absorption into the blood.

The cough, which is due mostly to nervous irritation, is greatly benefited by one-tenth to one-sixth grain of morphine sulphate, while the following inhalation, or spray, tends to materially ease both the frequency and severity of these attacks :

R.—Menthol 5 gr.
 Thymol 1 gr.
 Eucalyptol
 Gaultheria aa 10 min.
 Phenol 3 gr.
 White petrol. oil 1 oz.

Hæmoptysis has never been an alarming symptom under the administration of the following :

R.—Ac. sulph. dil. 4 dr.
 Fl. ex. ergot. 160 min.
 Ac. gallic. 4 dr.
 Tr. cinnamon. 1 oz.
 Aqua ad. 8 oz.

Sig.—Three to four drachms every four to six hours, till hæmorrhage ceases.

This, together with the inhalation of steaming vinegar, has minimized the danger from hæmoptysis.

When there existed marked anæmia, especially seen in the so-called pre-tubercular condition, or in the early stages of tuberculosis, iron is indicated, and may usually be combined with digitalis, arsenic, and strychnia.

In dispensing with that part of this paper set apart for drug treatment, I must say that no two patients are exactly alike in any one particular, so that we treat the patient rather than the disease, and, in order to do so intelligently and conscientiously, a strict inquiry must be made into the mode of living of each case, *i.e.*, as regards exercise, food, clothing, sleeping, location and size of day and night rooms, amusements, etc. Sleeping apartments should be large, airy, having a temperature of 70° and occupied solely by the patient. It should face the east, owing to the early sunlight, and should be divested of all articles not necessary to the comfort and happiness of the patient. He should rise at 7 a.m., take exercise as ordered by the attending physician, take a light cold sponge bath, rub dry with a rough towel, and then to breakfast.

The daily food should consist of boiled or roast meats, fish, oysters soups, eggs, cod-liver oil, butter, cream, vegetables, ripe fruits (being careful of apples and bananas), liq. peptonoids. Good fresh or peptonized

milk, mineral waters, egg-nogs, malt preparations, and coffee. Alcoholic drinks should be taken as prescribed by the medical attendant. The clothing should be light and of loose texture, according to the season of the year, the habit of wearing two to three suits of underclothing being unnecessary. A consumptive should be kept busy, when strength permits, and always in pure, fresh air, retiring at 9 p.m.

The teeth should be cleansed both before and after eating. Whether cuspidor or pasteboard receivers are used, the expectoration should be disinfected before allowing it to become dry. The excreta should be received in Condyl's fluid, or some other disinfectant.

In concluding, I may say that no set rules can be laid down in the treatment of this disease, the immediate surroundings and constitution of each case regulating its management. I thank you, Mr. President, ladies and gentlemen, for the kind attention you have given me.

INDICATIONS FOR ELECTROLYSIS IN ANGEIOMA AND GOITRE.*

BY CHARLES R. DICKSON, M.D.,

Electro-Therapist to Toronto General Hospital, Hospital for Sick Children, St. John's Hospital for Women, and St. Michael's Hospital, Toronto, Ontario.

IT is a subject for much congratulation that electrolysis, so long misused, abused, and neglected, is, thanks to our improved apparatus and increased knowledge of fundamental principles, now allowed by the foremost surgeons of the day a place on the list of measures to be relied upon in certain conditions. And it is greatly to the credit of the surgeon of the day that he is dealing with the whole subject of electro-therapy in a broad-minded, intelligent spirit. Four Toronto hospitals have now recognized departments of electro-therapy, and it is a matter of much encouragement to me that my best friends in the city of my adoption are the leaders in our noble profession.

There are many conditions in which electrolysis is often most clearly indicated, and possesses many advantages over other surgical interference, but I shall refer to merely two.

First, to angioma. Here the disfigurement is frequently the chief reason for consultation and incentive to operation, particularly when situated, as it so frequently is, on the face. In this location the probabilities of resultant scarring are much less than when other means are resorted to. Excision of the involved tissue is indeed, in many cases, quite useless, and the same applies to the cautery, scarification, and external applications, while the employment of injections is not free from danger.

It is not the purport of this paper to consider the etiology, the varieties, nor yet the pathology of angioma. Suffice it to say that electrolysis is applicable in the majority of cases. While it is true that cure may take place spontaneously, and interference is often deferred on that account, it is likewise true that the angiomatous condition may spread greatly, and if operated upon early the result will probably be more successful, and the scar, if any, pale away as the child grows up. When small and superficial, and the capillary vessels chiefly at fault, a single negative needle and

*Read at the twenty-eighth annual meeting of the Canadian Medical Association in Kingston, Ontario, on August 30, 1895.

mild currents may suffice to produce coagulation and blocking of the lumen of vessels ; but when the vessels are much enlarged, it may be necessary to employ the positive to produce the characteristic contraction and resultant atrophy. The indifferent electrode in these cases may preferably be a large pad at the shoulders.

In cases of the cavernous variety of large size, electrolysis may be carried to the extent of direct destruction of tissue, both poles being in the tumor.

The treatment is one which I very frequently employ, but I select one case from my notebook which illustrates the difference between proper and unsuitable technique :

On June 16, 1893, at the request of Dr. J. A. Temple, acting on the suggestion of Dr. Grasett, I treated a child, one year old, who had been subjected to six previous electrical operations with little appreciable benefit. The left ear was fully one-third larger than the right, and projecting. At the back of the lobe was situated an ugly pendulous mass, while in front were three raised "strawberry marks," and a plentiful supply of very noticeably dilated capillaries. Chloroform having been administered, on careful examination I detected a spot on the back of the ear where, by pressure, I could lessen the circulation through the blemishes in front. In this I inserted a gold needle connected with the negative pole of the battery, while in the centre of the pendulous mass I inserted a similar electrode connected with the positive pole. Fifty milliamperes was used for seven minutes, and seventy-five milliamperes for eight minutes.

That the negative needle had transfixed the supply vessel as intended was quite apparent, for the bubbles of hydrogen gas could be readily seen meandering through the dilated vessels in front and along the "strawberry spots." On turning off the current, the needles were carefully withdrawn, and oozing controlled by pressure with iodoform dusted pads. The sites of punctures were then coated with iodoform collodion, which was renewed subsequently as often as necessary.

The effect in this case was steady and progressive ; the spots gradually paled ; the pendulous mass atrophied ; the hypertrophy of the ear became less apparent, and the ear less projecting. No other interference was necessary, and to-day, the other ear having developed with age, there is little difference in appearance between them, certainly not sufficient to constitute a deformity.

Only one other condition will I allude to, namely, goitre. My researches, carried on for the past five years at the Toronto hospitals, and in my private practice in the treatment of the various forms of goitre by means of electricity, have attracted much attention, and have been most favorably

received by my confrères in that city. I may remark, in passing, that during this time I have treated over one hundred cases of the different forms of this disease, but confine my remarks to cystic goitre, as my methods of treating it differs from the usual technique.

The fluid is aspirated and replaced by a good electrolyte, that is, an easily decomposable conductor of electricity, various chemical solutions being used according to the indications. The aspirating needle together with the aforesaid electrolyte form an electrode conveying the current to the entire inner surface of the cavity, and through its walls also. The partially decomposed solution is removed on completion of the operation, and firm pressure kept up, with drainage if necessary. I aim to cause collapse and excite adhesive inflammation of the cyst wall, with atrophy, and in some cases secondary degeneration of the hypertrophied tissue. In this hope expectations are realized in the majority of cases, with very few exceptions ; but old, very firm fibrous tissue may resist, as it is almost impossible to excite any reaction whatever in it.

A recent post-mortem on a case I had previously treated revealed the site of the former cyst a mass of cicatricial tissue, while the lobe had undergone calcareous degeneration.

As to instruments. The lumen of my cannula permits the easy passage into cavities of No. 3 drainage tubing when required. The tube of the cannula is constructed of platinum, that it may be used with the positive pole if necessary, and the addition of a second stop-cock renders it independent of the reservoir when introducing it ; otherwise, this part of the apparatus is the usual Potain aspirator attachment. The use of chemical solutions corrodes metal parts ; therefore for the injections I employ a second bottle with tubes of glass leading to and from it. A third tube has also been introduced to facilitate the introduction of the solution. By another arrangement the sac may be evacuated without polluting this reservoir.

Shall the general practitioner employ electrolysis ? Yes, if he possess the necessary apparatus ; knows how to take care of it ; is endowed with the ability to use it skilfully ; has a minute acquaintance with its fundamental laws, and can properly estimate the wonderful power of this alluring agent. Otherwise, a thousand times, No.

Selected Articles.

ACETANILID AS AN ANTISEPTIC; WITH OBSERVATIONS ON ITS USE IN ONE THOUSAND SURGICAL CASES.*

BY THOMAS S. K. MORTON, M.D.,
Professor of Surgery in the Philadelphia Polyclinic.

DURING the past six months I have been employing acetanilid locally in a large number of surgical affections, with results so surprising in some respects as to make it difficult to restrain enthusiasm in commenting upon the antiseptic properties of the drug.

Having noticed mention of the remarkable powers of acetanilid in preventing pus-formation in the articles of Drs. Harrell and Bodamer, I began cautiously to employ the substance, and have since been extending its trial in many directions.

The action of acetanilid upon wounds, especially granulations, when used in full strength, is to produce intense dryness, blueness, and to check at once and prevent the formation of pus. Upon extensive granulating surfaces and chronic ulcers a slight burning sensation is at first perceived, which is rapidly succeeded by a sedative or anæsthetic effect. If used in sufficient quantity, a thin scab of acetanilid, combined with the wound secretions, forms, under which healing rapidly progresses. If a very large surface is exposed to the action of the undiluted drug, toxic symptoms promptly supervene in susceptible individuals. It is probable that children and the aged are more sensitive to its absorption than are vigorous, middle-aged persons. It is also probable that anæmia might follow too prolonged application of large quantities of the substance, because of its destructive action upon the red-blood corpuscles. This, however, I have not seen. The powder does not, as a rule, stick to wounds or hold dressings fast; but, when it does so, alcohol causes instant release by dissolving the drug.

Under no circumstances does acetanilid irritate the skin or wounds, even when used beneath impervious protectives or antiseptic poultices.

* From a paper read before the Philadelphia County Medical Society.

What may be the best vehicles for applying acetanilid must yet be proved. Upon most of my cases the pure powder was used from a dusting-box. This, while usually safe, I think has been an unnecessary waste, for very recent experiments in dilution have shown me that a one-fifth of one per cent. mixture with petrolatum was sufficient to arrest suppuration, and secure rapid healing in an extensive septic scald. All pain vanished after the first application.

When absorption of the drug has been desired, it has been used either pure or mixed with an easily absorbed agent, such as lanolin. When employed for purely local effect in ointment form, I have usually prescribed a dram to the ounce of petrolatum.

Acetanilid dissolves in 5 volumes of alcohol, in 20 volumes of ether, and in 200 volumes of water. It is soluble in liquid petrolatum to the extent of 40 grains to the ounce. In chloroform it very freely dissolves. What powders will prove best as diluents remains to be proved, but boric acid does not appear to interfere with its action.

By diluting with water a saturated alcoholic solution of acetanilid, the drug will be thrown out of solution in the shape of fine crystals, and will remain perfectly mixed in suspension long enough to permit of its use in this form as an injection for abscesses or carbuncles, in gonorrhœa, etc.

I have used acetanilid gauze in many cases in which iodoform gauze would previously have been indicated. This gauze was made after the glycerin and soapsuds formula for iodoform gauze of a strength of 10 per cent. by the nurses of the Pennsylvania Hospital. At present the J. Elwood Lee Company, of Conshohocken, Pa., is making the gauze by several formulas and of various strengths for experimental purposes. I believe that for the average wound requiring packing a very weak gauze will prove satisfactory and safe.

In the large number of cases upon which I have freely employed acetanilid, but twice have toxic effects been noticed. One was in an infant aged fourteen months. I had excised the hip for tuberculosis and packed with iodoform gauze. Upon re-dressing a few days later the iodoform was replaced by 10 per cent. acetanilid gauze. Four hours later the temperature dropped five degrees, and there were great pallor and feeble pulse. The temperature rose upon withdrawal of the acetanilid. The second case was one of superficial suppurative scald of arms, chest, legs, and head in a man aged fifty-seven years, who had for six days been dressed with boric acid ointment. About two drams of finely powdered acetanilid were dusted over the surfaces at 12 o'clock noon. At 5 p.m. the patient became blue, respirations somewhat accelerated, pulse slow and very compressible; face and extremities covered with cold perspiration; temperature normal; mind clear. All acetanilid was at once

removed. At 8 p.m. he became maniacally delirious and intensely blue. He yawned to such an extent as to dislocate the lower jaw several times. Beginning with the first symptoms of poisoning, he was freely stimulated with digitalis and whisky, and at midnight of the same day was again in normal condition. The delirium, of course, may in part or wholly have resulted from the whisky. Practically no suppuration took place afterward, and he was soon sent home well.

I have found that all ordinary suppuration ceases in the presence of acetanilid, even when much diluted, in a manner equally astonishing and gratifying. Abscess cavities, boils, and carbuncles, when opened, and dirty, greasy wounds, produced by machinery or upon the street, have healed, as a rule, without further suppuration, and in an unprecedentedly short time, after acetanilid has been applied in the form either of pure powder, gauze, ointment, or dissolved in alcohol, water, or oil, as an injection. Sloughing septic lesions have been trimmed up, dusted with acetanilid, and sutured without drainage, yet have frequently healed by primary union. Clean wounds have been likewise freely dusted and sutured, and have healed similarly, thus proving that the drug does not interfere with healing in the absence of sepsis. So slight is the secretion of wounds so treated that many extensive ones have been healed under the collodion scab.

Tuberculous lesions appear to be affected in a much better manner by acetanilid than by iodoform—probably in large part, as in other wounds and conditions, by the intense dryness of the surroundings depriving the bacilli of their required pabulum. Tuberculous bone cavities have healed rapidly under acetanilid gauze (10 per cent.).

A number of fistulas have instantly taken on a healthy appearance after injection of alcoholic, watery, or oleaginous solutions of acetanilid, and have quickly closed.

Suppurating joints freely dusted with the drug after opening have ceased to form pus, and under subsequent packing of the wounds with acetanilid gauze have healed with excellent functional results. In acetanilid I believe that we have the safest dressing to ward off the infection of joints subsequent to operation through wounds, persistent fistulas, etc. It would appear that pus microbes cannot exist in the presence of the drug, and that skin bacteria do not multiply in its proximity.

In compound fractures the use of the agent is obvious, and the results, so far as the prevention of sepsis goes, excellent.

As yet I have not injected suppurating or tuberculous joints, or acute or cold abscesses with the substance, but am about to commence some experiments in this promising direction.

Upon chancroids the effect of acetanilid is, perhaps, most surprising

of all. These troublesome sores heal almost instantly under a crust of the agent. At the Out-patient Department of the Pennsylvania Hospital during the past two months I have been able to study the effect of acetanilid upon a large number of such cases, as well as upon other venereal irritations about the genitals. All of these soft sores and inflammations have uniformly healed in from one to seven days with a single exception. This one was of a phagedenic nature, and required cauterization by nitric acid before it would heal under the acetanilid. My habit at present is to prescribe a dram of powdered acetanilid, and direct the patient to wash several times daily, and subsequently to rub in the dry powder. If the sore is beneath the prepuce, he is instructed to leave a quantity of the drug inside. Presence of the powder prevents excoriations by urethral discharges. The entire absence of odor from the drug is especially gratifying to venereal patients.

Syphilitic chancres and condylomata are usually much improved by the dry powder, and some are promptly cured. Secondary and tertiary ulcerations are stimulated by the drug, and, when thus relieved of the septic element, are prone to more rapid cicatrization.

External and internal rectal affections are instantly benefited by applications in the form of powder or by ordinary cocoa-butter suppository containing two or three grains of the drug. One case, a child with an ulcer of the rectum, complained of pain after full-strength powder was used. Irritable or inflamed hæmorrhoids are at once relieved by this suppository, as a rule. Fistulas about the anus heal very well when split open and packed with the gauze.

Ingrowing toe-nails rapidly lose their irritative element when painted with the alcoholic solution and packed with cotton containing the powder.

In injuries of the head, involving bleeding from the ear, I have packed the external auditory canal with pure acetanilid in order to prevent the invasion of the inner ear or brain by sepsis from without.

Before experimenting with this drug it had long been my custom to paint suture lines, after closing a wound, with a saturated solution of iodoform in ether in an attempt to sterilize the surrounding skin of its normal bacilli. This has given way to the saturated alcoholic solution of acetanilid, with the effect of almost always preventing stitch abscesses.

I have seen much to lead to the belief that in acetanilid we have at last found a substance which will either destroy or render inactive the normal bacteria of the skin by its absorption into and through the epidermis. A few facts point likewise toward the possibility of controlling certain inflammations of the lymphatics and superficial tissues by contact with the drug during absorption from the surface into the economy.

Possibly we may be able to render operative fields sterile, even of the skin bacteria, by the previous local application of acetanilid. Should this prove practicable, then we can operate with what has never before been secured—an absolutely sterile skin.

Finally, it should be pointed out what great possibilities of usefulness this drug may have in first aid to the injured in factories and mines, upon railroads, in ambulance service, and upon the battlefield.—*Philadelphia Polyclinic*.

While acetanilid has been largely superseded as an antipyretic and analgesic by substances which are less depressing, if the experience of Dr. T. S. K. Morton be corroborated by other surgeons, it will become even more valuable to the surgeon than it promised to be to the physician.

UNCURED GONORRHOEA.*

BY EDWARD RUSH PALMER, M.D., †

Professor of Physiology and Genito-Urinary Diseases, University of Louisville,
LOUISVILLE, KY.

IN February, 1892, I read before the Surgical Society a paper on "Uncured Gonorrhœa." I propose to-night to still further discuss the subject with reference to its characteristics and management in the male. I referred then to the inutility of the "cut-off" in the matter of extension backward to the deep urethra of this disease, the frequency of such extension, its marked dangers to the infected, and its latent dangers to others. The glass test, that has been so frequently and fully written up of late, shows the alarming frequency of the existence of active deep infection after all discharge from the urethra has ceased. For determining simply the existence or non-existence of posterior infection in reasonably recent cases, the simple collection of the patient's urine in two clean bottles will usually suffice. There will then be no shreds, but a general cloudiness of the water passed, in the first bottle only if the disease be confined to the anterior urethra, in both if it has invaded the deeper parts. One must always take the precaution of adding a few drops of acetic acid to the urine to determine that the cloudiness is not due to phosphates.

In chronic cases, cases in which the urine may be cloudy or flaky, and that have a history, subjective, objective, and clinical, pointing to deep and obstinate involvement, an important question of differentiation presents itself. In a general way we may say that as many as five different localities may be singly responsible for the similar symptoms presenting in different cases, namely, the deep urethra, the bladder, the ureters, the renal pelves, and the seminal vesicles. To exactly locate the disease in such cases is by no means a simple affair. It is, indeed, often an impossibility. More care must now be exercised in the glass test. The patient should be seen with a full bladder, which, except in acute cystitis, is usually feasible. The anterior urethra, back six inches, should be care-

* Read before the Louisville Academy of Medicine, 1895.

† Died, as a result of bicycle injury, July 6, 1895.

fully irrigated with some simple, cleansing hot wash by means of a fountain syringe hung seven feet from the floor, and a Jacque catheter, the patient standing. With a little practice this may be readily and effectively done. Two bottles are then used to receive the urine. The first represents the washings of the prostatic urethra, and, therefore, of the prostate and seminal vesicles ; the second the washings of the bladder, and, therefore, of it, the ureters, and the pelves. A floating or sinking *tripper fadem* or two, with otherwise clear urine, would indicate a granular deep urethra, and, in the vast majority of cases, endoscopic examination will confirm this, and furnish us the royal means of at once and effectually working a cure.

It is surprising what strong solutions of silver nitrate may be so applied without any other than the wished-for result. I rarely use in such treatment a solution weaker than twenty grains to the ounce, while sixty grains to the ounce is frequently required and well borne, a striking contrast with the objectionable effects so often following one- or two-grain solutions of the same salt applied by means of a Keyes or Ultzmann syringe. I use exclusively in such cases the Otis-Klotz urethroscope, which is exceedingly simple of design and easy of application. By a simple trick the straight Klotz tube may be carried clear into the bladder. It should be passed gently as far as it will go, and then, with the thumb against the obturator to prevent its ejection, the flange should be steadily and firmly depressed between the patient's thighs until the distal end will be felt to pass through the cut-off. It should then be steadily pressed onward until the flange has packed the penis up against the symphysis pubis, and then the obturator withdrawn and the Otis lamp coupled on. The bladder not being wholly empty, a stylet armed with a bit of cotton should be used to remove the few drops of urine present, and the examination and subsequent application are but simple matters of detail. I have frequently, by such procedure, seen into the trigone. Proper care should be taken to limit the application to the deep granular parts. Silver nitrate is usually the agent used. Of late I have seen good results follow the use of Schering's argemamin.

If, as is, however, frequently the case, the entire volume of urine is cloudy, in the majority of cases the trouble is cystitis, the parts involved being the prostatic sinus and the trigonal region. Finger is the only authority with whom I am familiar who denies the existence of gonorrhœal cystitis. Ignoring here all discussion of the good that follows the internal administration of anti-blennorrhagics and diluents, I desire to express my conviction that nothing will so speedily and so effectually cure this condition as persistent daily bladder-washing. Of the agents relied

on for accomplishing this end I may mention as best, saturated solutions of boric acid, potassium permanganate solutions, two to four grains to the pint, silver nitrate one-half grain to the ounce, bichloride of mercury 1 to 20,000 solution, and one per cent. trikresol. These are average strengths. The same method used in anterior urethral irrigation is used here, except that the catheter is carried into the bladder. Half a pint is injected and allowed to escape through the catheter; then, the second half-pint being introduced, the catheter is withdrawn and the patient allowed to void it naturally. Sometimes it is well to leave the second half, if mild, in the bladder for an hour or more.

The differential diagnosis between ureteritis and pyelitis is hardly possible. It should here, however, be borne in mind that those portions of the bladder, other than the trigonal region, are rarely, if ever, involved, and also that the location of the ureteral orifices and the character of their epithelial lining both favor gonorrhœal extension. Unless speedily cured by internal medication, it is probably only a question of time when gonorrhœal inflammation of the ureters will extend to the pelves. Topical treatment of the uterers in the female has recently been successfully accomplished by Dr. Howard A. Kelly, and also in the male with the aid of the cystoscope by Dr. James Brown, of Baltimore, and Nitze and Casper, of Germany. This procedure, however, so far as the male urethra is concerned, can hardly be considered practicable for other than exploratory purposes. In the instances wherein it has so far been attempted, the object has been to determine the condition of the kidney to be left in a contemplated nephrectomy.

Many a sufferer from pyelitis has had his healthy bladder washed for months, and not a few have submitted to cystotomies for the cure by rest and drainage of a cystitis that did not exist. The modern revival of suprapubic cystotomy has much increased the frequency of this blunder due to faulty diagnosis. If it has accomplished no benefit for the patient, it has at least taught the surgeon a valuable lesson in diagnostic art.

There are several symptomatic features that are common to both pyelitis and seminal vesiculitis. Of these, two are prominent: first, the obstinacy with which they persist after the most thorough topical treatment of prostate and bladder; and, second, their intermittent character, that is, their proneness to improve again and again to a point of apparent cure, only to relapse in a day or two to their old state of pronounced pyuria. Fortunately these features eventually narrow down our diagnostic work to these two diseases, and equally is it a matter of gratulation that this differentiation is a comparatively easy task. Of course there are other conditions, such as tuberculosis, neoplasmata, stone in the bladder, senile ulcerative states, etc., that produce persistent pyuria. It is not of such

but rather of the clearly gonorrhœal deep troubles in the otherwise healthy subject that I am speaking.

Ordinarily, the microscopic examination of bladder pus does not reveal much. When, however, we have concluded from persistent treatment and equal obstinacy on the part of the disease, from its intermittency, from rectal and, where possible, cystoscopic examination, that the disease is not in the bladder or prostate, the pus should be carefully examined, not with the expectation of finding tube casts, but with a view to the presence of the caudated and small oval epithelium that comes from the ureters and pelves, a useful yet not altogether reliable guide in diagnosis.

To outline the final elements in the differentiation between pyelitis and seminal vesiculitis, it is best to deal with the latter condition first. Each, it will be remembered, is characterized by obstinate resistance to bladder-washing and by intermittency of pyuria. Of the two pathological conditions, seminal vesiculitis alone has a pathognomonic symptom. The history of its occurrence, coincident with an absence of urethral disease, at once suggests the trouble. This is bloody semen. My first case of this sort was a classical one. He had resisted treatment for months, until finally the bloody mishap occurred as he was home-coming on a New Orleans sleeper. He brought the bloody shirt to me. It was some eight years ago. I was at a loss to account for it. He went to Hammond, who amputated a liberal section of his scrotum for varicocele. I do not know his history since. I have had a few similar cases. Two recent ones are : P., a married man, with history of a cystitis not diagnosed specific six months ago. He came to me with the statement that, having used a condom at home to prevent conception, he had noticed that its contents were bloody. He had slight pyuria. I made a deep injection of silver, one grain to ounce, and ordered ergot. I have not seen him since. T., an unmarried travelling salesman, treated for acute and declining clap for two months, and intermittent pyuria for two months more, made two trips, each time coming home uncured. He came home the third time, March 20th, with the history of two bloody nocturnal emissions. This case serves me as an illustration of diagnostic methods. I ordered a free saline purge and then examined per rectum. It has been wisely said, by Taylor, I think, that the most erudite touch cannot discover the seminal vesicles when healthy. In this case I could feel above the prostate and on each side and beneath the urinary bladder two bodies, much like unfed leeches, soft, round, and an inch or two in length. Milking these after the methods suggested by Fuller, of New York, I produced a pyuria. One case more in this connection. H., a patient well known to many of you, in that he has been operated on for cystic tumor seen by the cystoscope, but found wanting after a cystotomy. A free purge and a rectal search dis-

closed two cord-like, not leech-like, because this is an old case—two cord-like bodies, plainly thickened, and enlarged seminal vesicles. So we may hope, where the question lies between pyelitis and seminal vesiculitis, to include or exclude the latter by the history in some cases of bloody seminal discharges, and in most other cases by the presence after milking of pus in the urine.

The first case of pyelitis I ever saw to recognize was seen in consultation in Indiana some fifteen years ago, a septuagenarian, who, and this was considered the great feature of the case, had not tasted food in any form for twenty-one days. He had a fairly well-defined tumor over the right kidney. On three separate occasions in twenty-four hours I was able by manipulation to decrease the swelling and produce pronounced pyuria. Operative interference was denied, and he was gathered to his fathers. S., a young man of strumous habit, presented some eighteen months ago with a furious pyuria. History indefinite. After two months' bladder-washing, combined with cod-liver oil, diuretics, and tonics, the case was pronounced tuberculous kidney. He sought other treatment, and finally, *in extremis*, I learn, submitted to a nephrotomy, a quart of pus being evacuated. He subsequently died. Another case, that of D., a young man with chronic cystitis (?), so diagnosed by me. He was treated for a couple of months topically and internally with no benefit, and a perineal section done for rest and drainage, which was kept up with daily washings for one month. No benefit. Conclusion, faulty diagnosis, pyelitis, probably tubercular. He was sent to the country, and, while never particularly anæmic, he came home much improved, but still with pyuria. About two months ago he contracted a fresh gonorrhœa, which was speedily complicated with first single, then double, epididymitis. To-day he is relieved of these intercurrent troubles, but the pyuria goes on. He is a fairly robust man, a porter in a wholesale whisky house, and examination per rectum fails to show any enlargement of the vesicles.

How shall we diagnose either pyelitis or seminal vesiculitis other than by the methods I have so far laid down? Briefly, it cannot always be surely done, but in many cases the following methods will prove of much value: In examining for vesiculitis order first a saline purge or an enema. Empty and wash out the bladder until the returning fluid is clear. Then throw into the bladder four or five ounces of mild aseptic fluid. Leave it there and milk with the forefinger, per rectum, the vesicles. If you do not plainly feel them, crowd the forefinger deeply in above the prostate and sweep downward over the base of the bladder where the vesicles should be. Let the patient rest a short while, and then void the injected fluid. If the fluid is cloudy, purulent, it is a case of vesiculitis. If not, while it may still be of that character, suspect more strongly the kidneys. Exclusion of

the seminal vesicles, as I have indicated, goes a long way toward establishing the existence of pyelitis.

In the manipulative examination of pyelitis the procedure is practically the same. After washing the bladder and leaving four or five ounces of fluid in it, the patient should be made to lean over a chair or table, and the dorsal and lumbar region should be stroked *a la massage* firmly and for some time in a direction from over the kidneys downward along the course of the ureters. While this is not so sure a means of milking as the rectal process for vesiculitis, it is sometimes of much value. If it fails the first time, at a subsequent trial half an hour or more should be allowed to lapse before the fluid is voided from the bladder.

For those of you who may desire to further study these interesting questions I have prepared the following list of recent articles and their authors : " Diseases of the Seminal Vesicles," by Paul Thorndyke, M.D., Volume 1, Morrow's System ; " Acute Urethritis," by George E. Brewer, Volume 1, Morrow's System ; " Urethritis Posterior and the Diagnostic Value of the Modified Thompson Test," by Hermann Goldenburg, M.D., *Journal of Cutaneous and Genito-Urinary Diseases*, December, 1894 ; " Persistent Urethral Discharges Dependent on Subacute or Chronic Seminal Vesiculitis," by Eugene Fuller, M.D., *Journal of Cutaneous and Genito-Urinary Diseases*, June, 1894 ; " Gonorrhœal Pyelitis and Pyo-Ureter Cured by Irrigation," by Howard A. Kelly, M.D., *Bulletin of the Johns Hopkins Hospital*, February, 1895 ; " Catheterization of the Male Ureters," editorial in the *Medical News*, April 6, 1895 ; " Chronic Inflammation of the Seminal Vesicles," by Gardner W. Allen, M.D., Boston ; and F. B. Robinson, B.S., M.D., " Disease of the Seminal Vesicles," the *Medical News*, May 7, 1892.—*The American Practitioner and News*.

Clinical Notes.

ATROPIA IN COCAINE POISONING.

By JOHN B. FRASER, M.D.,

TORONTO.

I HAD removed a tumor of several years' growth—from the region of the cervico-dorsal vertebra—using 80 or 90 min. of a 2½ per cent. solution of cocaine to control the pain ; the patient having refused to take an anæsthetic. During the operation the patient did not complain of pain; but about fifteen minutes afterward said he was dizzy ; he yawned frequently ; complained of great weakness ; the pulse rate was increased, but soft and weak ; respirations shallow ; perspiring freely, the skin cold and clammy ; he was unable to walk, had dimness of vision, and a depressing sense of some impending trouble.

Matters were becoming serious, as unmistakable signs of cocaine poisoning had set in.

By using sp. ammon. arom. and sp. vini gallici matters improved, but only temporarily, both seeming to lose their effect in a short time.

Knowing that atropia would meet some of the symptoms, I used $\frac{1}{100}$ of a grain of the sulphate, repeating in fifteen minutes, the two doses producing their usual effect, and acting very satisfactorily. My reasons for using atropia were that :

COCAINE.

- (1) Weakens the heart's action.
- (2) Increases the pulse rate.
- (3) Pulse soft.
- (4) Relaxes pores of skin ; allows perspiration.
- (5) Respirations increased, but shallow.
- (6) Causes nausea.

ATROPIA.

- (1) Tones the heart's action.
- (2) Decreases the pulse rate primarily.
- (3) Pulse firm.
- (4) Contracts pores of skin, checks perspiration.
- (5) Respirations full and steady.
- (6) Prevents nausea.

Knowing that one trial would not give conclusive results (although very favorable in this case), I would like others to try the drug, and kindly report the result in THE CANADIAN PRACTITIONER.

A CASE OF INFANTILE SCURVY.*

By HENRY T. MACHELL, M.D.,

Professor of Obstetrics, Women's Medical College, Toronto.

ON November 15th, 1894, I saw Mrs. B.'s baby, aged eleven months, and was given the following history. Baby was perfectly well up to five weeks ago, when Mrs. B. went away for a short holiday, leaving the baby at home. The child seemed as well as usual the day the mother returned, but the following morning and subsequently it was noticed that she did not stand or bear her weight on her feet as well as before Mrs. B.'s holiday. This inability to stand, even after it was noticed and spoken of, was not always present. On asking how the baby had been while she was away, the mother was told that on one occasion both baby and high chair had fallen to the floor, and that while the baby had been badly frightened at the time she did not appear to mind it long. Within a day or two after Mrs. B.'s return home, the baby was tipped out of her baby carriage on the road. From this time she seemed to get steadily, though slowly, less able to bear her weight on her legs, and, in addition, she would cry out if the legs were moved suddenly, as in the act of changing the napkins. While the difficulty of standing seemed to be a matter of both legs, the mother noticed, especially during the last week or two, that movement of the right leg seemed to cause more pain than the left one, and that the baby often cried out if one of the other children ran up against either leg or foot. During the last week or ten days prior to my seeing her, marked pain always occurred on putting on or taking off the stockings. This pain was more marked in the right leg, and was more noticeable when the leg was flexed. During the few days before I saw her the mother had never put on or taken off the stockings, or changed the napkins, without giving rise to pain and discomfort. Sometimes the baby would scream out, at other times only fret. After the disturbance incident to putting on the stockings or changing her was over, she would appear to be as happy and contented, if in a sitting or recumbent posture, as she had ever been. She slept well all night, and also took her afternoon sleep as well as usual, though during the past week it had often been more difficult to get her to go to sleep.

* Read at the meeting of the Ontario Medical Association, June, 1895.

During the last five weeks, the baby, though ailing, had not lost flesh or color; in fact, she was looking well, was fairly fleshy, of the average size, had the usual number of teeth, and seemed to be supplied with as much red-blood as the average hand-fed baby. While the skin had not the pink color of the nursling, she was not pale, and her muscles were neither soft nor flabby.

I was told that she had been weaned at five months, and that since that time she had been fed on oatmeal gruel sweetened with cane sugar, and that almost as soon as the nursing was stopped the baby began to improve. She had been tried several times with the addition of a small amount of cream, but on each occasion it had to be stopped because it disagreed with her. The cream, though given in small quantities, always produced an acid condition of the stomach, and was followed by vomiting and diarrhoea. A return to the plain gruel resulted in a cessation of the vomiting and a better condition of the alvine evacuations.

With the exception of a short attack of cholera infantum last summer, she has been considered as strong as the other children. This is the fifth child and the first girl, and they have all been weaned about the same time (five months). With two of them the oatmeal seemed to disagree, but with the boy, now considered the strongest of the family, it agreed the best. With the exception of eczema in two of them, they have always been strong and healthy.

Present condition. The child looks well, and, lying in her mother's arms, seems as if nothing ails her. A reddish blush is noticed on the right ear. It is irregular in shape, a little larger than a twenty-five-cent piece, and erythematous in appearance. It was noticed about a week ago, and has not varied. It is neither tender nor hot. For a hand-fed baby, she is of average size and weight. The lips and mucous membranes of the mouth are a good pink color, the tongue is clean, there are six teeth, and the bowels are regular. She is bright, smiling, and seemingly happy, but, on the mother's attempting to put her across her knees, the child's brows begin to contract, and as the stockings are taken off she cries out, the more so as the right one is pulled off. As the mother raises up the hips to take off the napkin, she cries out again. As soon as she settles down in the new position the pain seems over, and she is bright once more. She moves either leg voluntarily, but seems careful as to the movements of the right one. There are a few faint, delicate petechiæ scattered from the knees to the ankles.

The ankle and knee joints appear normal as to size and movement. On making passive motion at the hips, there is decidedly more resistance at the right than at the left one. On comparing the joints, no difference is appreciable as to shape, size, or tenderness on pressure, but there is

more pain on flexing the right thigh, or rotating the head of the femur in the acetabulum.

Temperature and pulse normal.

There is no spinal curvature or tenderness, and no evidence of commencing Pott's disease.

The sacro-iliac joints are, apparently, normal.

There is no bursitis about the right hip-joint.

The absence of tenderness or swelling about the hip, or any other joint, would appear to exclude rheumatism.

The absence, also, of the initial acute inflammatory attack and the gradual onset would rule out infantile paralysis.

There was no free perspiration of the head, no beading of the ribs, and no thickening of the epiphyses, which, taken collectively, would exclude acute rickets.

The inability to stand on her legs, the pain on movement of either leg, and, more particularly, the right one, seem, in connection with the two falls about five weeks ago, to point to some commencing inflammatory condition about the hip-joint.

I could only suggest keeping the child as quiet as possible.

November 18. Dr. B., the baby's father, at home. Baby is very much as three days ago. Pain on movement of legs more marked, and, as at last visit, particularly the right one. Any movement of legs or pelvis gives pain and child screams out. Grasping the right leg anywhere about the foot or ankle or above or below the knee and moving the hip-joint in any direction seems to give pain. Some form of fixation apparatus to limit movement appears to be indicated.

Neither erythematous patch on ear nor petechiæ on legs have varied since last visit.

November 20. Thinking the cause of the pain was located in or about the hip-joint, Dr. B. E. McKenzie was asked to see the child, both for the purpose of clearing up the diagnosis, and also of suggesting some comfortable splint or appliance to restrict the movements of the right leg.

While acknowledging that movement gave pain, and that the baby was afraid to put its legs out straight or stand on them, Dr. McKenzie was not able to locate the seat of the pain even by the usual process of exclusion. The child was much more fretful and peevish than any time I have seen her, and at night was very much so. Temperature, $99\frac{1}{2}^{\circ}$ in rectum; pulse, 120. The gums surrounding the upper four incisors look a bluish or purple color, and are considerably swollen. The blueness does not extend beyond the outer border of the second incisors. There is no blueness around the lower incisors. This condition of the gums has developed since my last visit. Another condition also occurring since the last

visit was a glazed or shining appearance of the skin of the legs and lower part of the thighs. Besides this, the heels were quite red and inflamed-looking, probably from friction. Dr. McKenzie suggested waiting.

November 21. Dr. B. came in to see me, bringing with him the last number of the London *Lancet*, and said an article by Dr. Barlow on "Infantile Scurvy" cleared up his baby's case most completely. The same article in the *British Medical Journal*, November 18, 1894, will well pay perusal by the members of this association who have not seen it. The diagnosis having now been made, the treatment was: equal parts milk and barley water, the yolk of soft-boiled egg, the red gravy of roast beef or mutton, and teaspoonful doses of grape fruit juice.

November 23. Baby apparently easier on moving her legs or thighs.

The slightest squeezing of either tibia or femur causes pain. This is particularly marked in the left leg, not the right one, as heretofore. The rash on legs is less distinct, the gums are not so blue or spongy, and the erythematous patch on the ear is not so well defined as even two days ago. After this, improvement from one day to another could be seen. Within *five* days all swelling and tenderness whatever had disappeared from the legs. The gums were practically normal in seven days.

In the light of Dr. Barlow's article and the prompt improvement following the change in diet, I have no doubt whatever that this was a case of infantile scurvy. In this country at least these are uncommon cases. I have never seen one before in private practice, and what is more to be wondered at is that we have never had a case in the Hospital for Sick Children or the Infants' Home, both of which have been in existence more than twenty years.

SOME UNUSUAL CASES IN PRACTICE.*

BY GEORGE ACHESON, M.A., M.B. TOR.,

GALT, ONT.

THE title of this paper may, perhaps, not commend itself to some of my fellow-practitioners, especially to those who have been longer in practice, and have had more experience than I. But I think the cases I am about to relate are of sufficient interest to be recorded, if only because the ordinary text-books refer to them as being of comparatively rare occurrence; and a little discussion of them, by those in whose practice they may not be unusual, may be helpful to us all.

As these half-dozen cases, then, have nothing in common, except that they are out of the usual run, I shall say nothing more about them collectively, but proceed to briefly relate them in the order in which they came to my notice.

DOUBLE CEPHALHÆMATOMA, WITH ENLARGED THYROID.

On June 11, 1893, I was called to attend Mrs. H., in her second confinement. She had been delivered with forceps of her first child (female) after a tedious labor by another medical man some two years and a half before. She was a young, vigorous, and healthy woman, with no pelvic deformity. On my first examination everything was found normal, with the head presenting and just entering the brim. Pains were strong, and labor seemed to be progressing nicely; but the head stuck between the arch of the pubes and the promontory of the sacrum. After waiting for a considerable time, and seeing that no advance was being made, I applied the forceps, under chloroform anæsthesia, and with great difficulty extracted a vigorous male child weighing thirteen pounds. The blades of the forceps (Elliott's) had been applied, one behind the left ear, the other over the outer part of the right frontal bone, and in both these situations there was some contusion of the skin. But the most interesting appearance about the child was a well-marked fluctuating swelling over each parietal bone, bounded by a hard elevated circle with a soft centre, evidently due to an effusion of blood beneath the periosteum. These

* Presented at the Ontario Medical Association, Toronto, June, 1895.

tumors gave the head a grotesque appearance, and occasioned great alarm to the parents and friends. I assured them that all would come right in time without treatment of any kind. Next day, seeing that the swellings were larger and more tense, and that they seemed to interfere with the child's comfort in lying, I decided to aspirate them, and apply pressure by a bandage. I used a small trocar and cannula, taking all precautions for asepsis, and withdrew from each a quantity of dark fluid blood. In a day or two they filled again, but not to such an extent as before aspiration. As they did not appear to inconvenience the child in any way, except when pressed upon, I left them completely alone, and had the satisfaction of seeing the child's head gradually assume a more symmetrical shape, until, at the end of two months, all trace of the tumors had disappeared. True, cephalhæmatoma, of course, is not a very uncommon injury, but it is almost invariably unilateral; it is most frequently met with in first confinements, and is more common in males than in females.

Another point of interest in this case was an enlarged thyroid, the gland being uniformly and visibly increased in size. No treatment was adopted, and this, too, subsided almost completely in a couple of months. The cause of this enlargement I cannot well understand. It could not have been due to injury from traction on the head, though possibly it is to be explained by some lesion of the circulation of the gland caused by the extreme pressure on the head during delivery.

LEUCOMA.

In September, 1894, Mrs. C., æt. about 60, consulted me about a sore mouth, which had been troubling her for some months, and which was gradually getting worse in spite of all domestic methods of treatment. I found an irregularly shaped white patch occupying the inner surface of the lower jaw, just below the alveolar border on the left side, extending also a little past the middle line in front, and invading the floor of the mouth and under surface of the tongue. The teeth had all been extracted, and the patient was wearing upper and lower plates, though the lower plate hurt her so much that she wore it but seldom. There was no ulceration, the mucous membrane, if such it could be called, being thickened, white, smooth, and of a leathery feel. She said that sometimes pieces of white skin would peel off, leaving a very tender, painful, red surface, which would become gradually covered again by the white pellicle. In fact, the sensations described, with the history and appearance of the mouth, made it certain that this was a case of what has been called by the various names of leucoma, leucoplakia, psoriasis, ichthyosis, keratosis, etc. But this is a condition usually limited to the dorsum of the tongue, though not unknown in other parts of the buccal mucous membrane. It is very unusual, however, to find it in woman. Barker, in Holmes' System of

Surgery, has collected 110 cases, of which only 9 occurred in females. Of the 101 cases in males, 55 affected the tongue only; 33 the tongue and cheeks; 12 the lips and cheeks; 1 the hard palate; and in 4 the location was not mentioned. Of the whole 110, syphilis was certain in 33; while in 19 it was certainly absent; 75 were habitual smokers; only 4 did not smoke at all. In my patient there was no syphilis, nor was she a smoker, but I am inclined to ascribe the cause to the irritation of the lower plate, which, she said, had never been comfortable. Leucoma, in whatever situation, is always of interest, as being a possible precursor of epithelioma. The only treatment is palliative, and in this case I gave a wash of sodii bicarbonas, gr. x to 1 oz., with a little listerin and glycerin.

RETRO-PHARYNGEAL ABSCESS.

The next case is one of retro-pharyngeal abscess, complicating capillary bronchitis, in a male infant five months old.

I attended the mother when this child was born. The family history is excellent, and the child was unusually large, strong, and healthy until the middle of November last, when I was sent for to see him, and found him suffering from a not very severe gastro-intestinal catarrh. In two or three days this succumbed to ordinary treatment, but about ten days afterwards I was again summoned, and found that he had developed capillary bronchitis of a rather severe type. This ran the usual course, but, although the stethoscope showed that the pulmonary trouble was subsiding, the breathing, especially inspiration, was getting worse, and the general condition was becoming very serious indeed. A consultation was held, and it was feared that there was pulmonary atelectasis. All efforts were made to stimulate the patient, and to secure entrance of air to the pulmonary vesicles, but without much success. About this time I noticed a swelling on the right side of the neck, and that the head was carried stiffly towards the left side. It then occurred to me that the symptoms might be explained by a retro-pharyngeal abscess bulging forward so as to obstruct the entrance of air through the glottis. On examining the pharynx such a tumor could be seen and easily felt, and I at once decided to puncture it with a knife. I was rewarded by seeing a considerable quantity of creamy pus discharged from the mouth, with immediate relief to the breathing, soon followed by amelioration of the other symptoms. In a couple of days the dyspnoea and other bad symptoms had returned, and I opened it again. A smaller amount of pus escaped this time, and again the child's condition improved. It was necessary, however, to open it the third time, three days after, and from that time on recovery was progressive and rapid. This was about five weeks from the time I first saw the patient.

The points of interest in this case are the causation of the abscess, the unlikelihood of making the diagnosis, and the rapid and complete recovery.

DEEP ATHEROMATOUS CYST IN THE NECK.

The next case is of interest chiefly from a pathological point of view.

Mr. L., æt. 35. Consulted me about a year ago in regard to a swelling on the right side of his neck, which he had first noticed some months previously, and which was gradually increasing. I thought at first it might be a chronically inflamed lymphatic gland or group of glands, and prescribed rubbing in *lin. potassii iodidi cum sapone*. After using this for two weeks without producing any effect other than rendering the swelling softer, I examined it more carefully, and decided that it was a cyst. I punctured it with a trocar and cannula and evacuated a couple of ounces of sebaceous matter of the consistence of ordinary cream, which, under the microscope, showed epithelial cells in various stages of fatty degeneration, globules, and granular particles of fat, and crystals of cholesterin. This cleared up the diagnosis, and from the situation of the tumor—between the angle of the jaw and the clavicle—I concluded that it was a cyst of congenital origin developed in connection with the fourth branchial cleft.

In a couple of months it had filled again, and, as it was not convenient for the patient at the time to undergo any more radical operation, I simply opened it freely with the knife, and washed it out thoroughly with a $\frac{1}{1000}$ solution of corrosive sublimate. The skin wound healed immediately, and I hoped that the cyst would be obliterated by adhesion of its walls. But three months after the swelling was again quite apparent, and seemed to be extending farther anteriorly. He then decided to have the cyst dissected out if possible, and in February last, under chloroform anæsthesia, assisted by Dr. H. F. Mackendrick, I made an incision along the posterior border of the sterno-mastoid three inches long, and with considerable difficulty dissected out the whole cyst. It was about the size and shape of a lemon, and closely adherent to the deep fascia and intermuscular septæ. The wound healed kindly in three or four days, and has given no trouble since.

COMPLETE LOSS OF SIGHT IN ONE EYE FOLLOWING ACUTE DACRYOCYSTITIS, WITH STENOSIS OF NASAL DUCT.

The next case I shall refer to very briefly, and leave the discussion to the ophthalmologists.

Last December I was called to see Mr. B., a farmer of about 60 years of age. He had had stenosis of the nasal duct, with inflammation of the lachrymal sac on both sides years ago, and the canaliculus on each side

had been opened. He gave a history of recurrent attacks of inflammation, sometimes on one side, sometimes on the other. On this occasion the trouble was on the right side—the eye being completely closed by the swelling of the lids, especially the lower one, so that it was impossible to uncover the least part of the globe, and he was in acute pain. By the use of hot fomentations for twenty-four hours pain and tension were somewhat relieved, and it was then evident there was pus in the lachrymal sac which was burrowing in the cellular tissue of the lower lid. I opened the abscess by an incision in the lower part of the lid towards the inner side, and applied a moist antiseptic dressing for a couple of days. By this means the swelling and acute inflammation were subdued, and it was then found that the eye was completely blind. I afterwards used the nasal probes and overcame the stenosis of the duct; but the eye continued to be absolutely blind, though the ocular conjunctiva, cornea, and other parts of the globe were intact. I gave him pilocarpin and potass. iodide with no benefit, and the blindness persisted. Not being sufficiently expert with the ophthalmoscope, I cannot say what is the condition of the fundus. My friend, Dr. R. A. Reeve, to whom I mentioned the case, suggested that it might be due to a retro-bulbar neuritis, or to thrombosis of the arteria centralis retinae.

MEMBRANOUS COLITIS.

The last case to which I shall call your attention has an especial interest for me, as the patient is one of my own family, a little girl $3\frac{1}{2}$ years old.

About six months ago she began to fail a little in flesh, though she never was a very fat child. She had always, however, been perfectly well. It was noticed at this time, too, that she was becoming capricious in her appetite, some days eating scarcely anything; that she was getting very peevish, nervous, and irritable; and that every few days there was an abnormal looseness of the bowels, with the passage of a good deal of mucus. A dose of gray powder would always improve matters for a while, but the mucus diarrhoea invariably returned. After a while it was noticed that long shreds and tubes of membrane were sometimes abundant in the stools. Under the microscope, these tubes appeared to be fibrillated and studded with short lateral prolongations. They answered the chemical tests for mucin, but from their microscopical structure one would say that they were fibrinous. There was no pain complained of, and all that could be noticed was that the child was not thriving.

When the existence of membranous colitis, or tubular diarrhoea, as it is sometimes called, was discovered, the diet was more carefully looked after, saccharine and starchy substances being prohibited as far as possible, and large enemata of a solution of copper sulphate, gr. ij. to ʒi., or equal

parts of distilled hamamelis and water, were given daily, or every second day, after washing out the bowel with plain water. As an alterative and tonic, *℥xxv.* of liq. hydrargyri perchloridi and *℥xlv.* of syr. phosph. co. were administered three times daily after meals. This mode of treatment, with life in the open air, has made a great improvement, so that for a month or more there has been hardly any membrane passed, and the general condition is now about as good as ever. The injections and medicine have, of course, been stopped.

Progress of Medicine.

MEDICINE

IN CHARGE OF

J. E. GRAHAM, M.D., M.R.C.P. Lond.,

Professor of Medicine and Clinical Medicine, University of Toronto; Physician to the
Toronto General Hospital, and St. Michael's Hospital;

AND

W. P. CAVEN, M.B. Tor.,

Lecturer in Clinical Medicine in the University of Toronto; Physician to
Home for Incurables.

TREATMENT OF DIPHTHERIA BY THE SERUM OF IMMUNE HORSES.

The second paper, by MM. Martin and Chaillou, gives the result of the treatment of diphtheria by the serum of immune horses at the Hôpital des Enfants-Malades between February 1 and July 24, 1894. During this period 428 cases were sent into the diphtheria pavilion of this hospital, of which 20 died on admission. The remaining 408 received injections under the skin of the flank of 20 c.cm. of serum. The serum used had an immunizing power of about 50,000 to 100,000. After injection, an examination was in all cases made for the Klebs-Loeffler bacillus. In 128 it could not be found, and these must not be regarded as cases of true diphtheria, though some had croup and some false membrane. It is worthy of note that none of those not suffering from true diphtheria, but injected, contracted the disease subsequently, although they were exposed to the poison in the wards, and there is ground for believing that the injection of the serum acted as a protective. Each of the remaining cases of true diphtheria had a second injection of 10 to 20 c.cm. of serum twenty-four hours after the first. If the pulse and temperature remained high, still another injection of the same amount was given subsequently. Further injections were in some cases resorted to. The largest quantity used in any case was 125 c.cm., the smallest 20 c.cm. Of the total number brought to the diphtheria pavilion of the hospital 24.5 per cent. died after the habitual use of serum was commenced (between February and July). Of the 300 cases proved to suffer from true diphtheria 26 per cent. died. Now, the mean death-rate from diphtheria of the children's

hospital in the four years ending 1893 was 51.7 per cent., the lowest being 47.6 in 1892.—Martin and Chaillou, in *Annales de l'Institut Pasteur*.—*The Medical Chronicle*.

THE ETIOLOGY OF SUPPURATIVE NEPHRITIS.

Von Wunschheim, of Prague (*Zeit. für Heilkunde aus Prag*, vol. xv., Nos. 4 and 5, 1894) says:—

From abundant clinical material and carefully-conducted experiments, this author comes to the following conclusions:

(1) Pyelonephritis is the result in the great majority of cases of infection by the bacterium coli commune, in a fewer number of cases through proteus or the more ordinary forms of suppurative cocci.

(2) In a certain number of cases in which the ordinary pyogenic microbes are the cause of irritation a consecutive pyæmia results.

(3) Pyelonephritis resulting from the irritation of staphylococci and streptococci is not to be differentiated from the other forms alone by the pyæmia present, but also microscopically by the marked necrosis of tissue, and the absence of increased inflammatory tissue-formation which is produced by the bacterium coli commune.

(4) It is not probable that the *typical* ascending pyelonephritis can be produced by the passage of micro-organisms from the bladder through the circulation.

PROFESSOR KLEBS IN AMERICA.

Prof. Edwin Klebs, of Strasburg, is at present in Asheville, N.C., where he is pursuing special investigations in connection with the cure of tuberculosis.

Prof. Klebs came to America on the invitation of Dr. Karl von Ruck, of Asheville, with whom he has since become associated. An experimental laboratory has been established in the Wingate Sanitarium for consumptives, and a course of practical instruction to members of the profession will shortly be given in the bacteriology, pathology, physical diagnosis, and the general management and care, as well as the specific treatment, of tuberculosis.

In his experiments on tuberculin, he has found it to contain alkaloid soluble in alcohol, toxin or toxalbumens, precipitated by sodic iodide of bismuth, while another albuminous substance, a soz-albumen, was found in the alcoholic precipitate. With the latter substance, now called anti-phthisin, Prof. Klebs has cured guinea pigs entirely, and kept others alive for long periods, while the control animals perished under the usual course and manifestations of tuberculosis, and in the usual short periods of time

In connection with tuberculin, it was found that to the alkaloids were due the depressing and injurious effects on the heart; to the toxalbumens the fever, malaise, and inflammatory effects, while the soz-albumen or antiphthisin was free from these properties. The antiphthisin is being used experimentally by Dr. Von Ruck and Prof. Klebs as a specific germicidal product for the treatment of tuberculosis, and apparently with good results. It can be used in much larger doses than tuberculin, and does not give rise to the fever aching, malaise, and congestion of tubercular areas which occurred with the latter remedy.

It may be given by the hypodermic method, or by rectal injection.

Prof. Klebs could not have chosen a better place for his experiments. as the climatic and dietetic and other advantages which are to be found in Von Ruck's sanitarium afford valuable adjuncts to be used with a remedy for such an exhausting disease as pulmonary tuberculosis.

THE TREATMENT OF MALARIAL HÆMATURIA.

Drs. H. A. Hare and Wilmer Krusen present the results of a collective investigation, based upon one hundred and seven replies to questions which were sent out, the area covered being that having a death-rate from malaria of 70 per cent. or over. Thirty-two remedies were used: the first six were calomel, tincture of ferric chloride, arsenic, ergot, turpentine, and sodium hyposulphite, each remedy being used by ten or more physicians. Calomel is used in from 5 to 50-grain doses, and seems to be most in favor. Tincture of ferric chloride is used either alone or combined with arsenious acid in small doses of quinine. Arsenic is recommended in from 1 to 5-drop doses (Fowler's solution); the only caution stated is that the urine shall be clear. Sodium hyposulphite may be given in from 20 to 40 grains every three hours, after thorough purgation with calomel. Ergot is regarded as a hæmostatic. Turpentine, in capsule, ten drops every three hours until the urine clears, and a turpentine liniment in the lumbar region, may arrest renal hæmorrhage.—*Therapeutic Gazette*, 1895, No. 5, p. 291.

ULCERATIVE ENDOCARDITIS IN THE SEQUENCE OF SPECIFIC URETHRITIS.

Winterberg (*Festschrift zum 25. Jaehr. Jubilæum des Vereins Deutscher Aerzte zu San Francisco*, 1894) has reported the case of a man, twenty-five years old, who, in the course of an attack of specific urethritis, complicated by right-sided epididymitis and enlargement of the glands in the groin, was seized with a chill, followed by fever and general malaise, together with swelling of both elbow-joints. Rest in bed, together with the administration of sodium salicylate, was at once prescribed, but improve-

ment failed to ensue. Cyanosis and dyspnoea set in, and speech became difficult and the sensorium obscured. There was general dullness on percussion of the chest, and moist râles were heard on auscultation, together with loud, blowing systolic and diastolic murmurs over the heart, especially in the aortic and pulmonary areas. The knees and ankles also became slightly swollen. The liver and spleen were enlarged, and the stools contained blood and the urine albumin. Death took place amid the signs of exhaustion.

Upon post-mortem examination both pleural cavities were found to contain a large amount of serum, compressing the oedematous lungs. The pericardial sac contained rather more than three ounces of sero-purulent fluid. The heart was enlarged, and the myocardium, which presented a grayish appearance, contained numerous purulent foci. The aortic and pulmonary leaflets were almost entirely absent, and replaced by friable caseous remains. The mitral and tricuspid leaflets presented similar changes, though not quite so advanced. The liver and spleen contained numerous small hæmorrhages, and the kidneys had undergone amyloid degeneration. The small intestine was the seat of numerous ecchymoses. Peyer's patches were reddened and swollen, but free from ulceration. Microscopic examination of fragments of the cardiac valves disclosed the presence of gonococci.—*American Journal of the Medical Sciences*, July, 1895.

THERAPEUTICS

IN CHARGE OF

GRAHAM CHAMBERS, B.A., M.B. Tor.,

Professor of Analytical Chemistry and Toxicology, Ontario College of Pharmacy; Lecturer
in Organic Chemistry and Toxicology, Woman's Medical College;

AND

WILLIAM LEHMANN, M.B. Tor.,

Physician to the Home for Incurables and House of Providence.

ERUPTIONS CAUSED BY DECOMPOSITION OF INTESTINAL CONTENTS, AND THEIR TREATMENT.

Singer (*Wien. Klin. Woch.*, 1894, No. 3) states that the amount of indican in the urine is an index as to the activity of putrefactive processes in the contents of the bowels. An important point to note is that a group of dermatoses appear and disappear in direct relation with the decomposition of the chyme.

In six cases of acute and chronic urticaria Singer found that hydrochloric acid was entirely lacking. The administration of this acid in the form of medicine cured the skin disease.

Many cases of acne vulgaris and senile pruritus yielded only to intestinal antiseptics.

Menthol was commended as the best remedy, since it is not only an antiseptic and tonic, but also increases peristalsis. It was given as follows:

R. Menthol, gr. iss.
Oil of sweet almonds, *m v.*

Make one capsule. Take six to ten capsules daily.

Cases of scarlatiniform eruption, œdema, and ecchymosis were at times benefited by this treatment. Copious antiseptic enemata are often serviceable, usually those containing boric acid and tannin. The best agents to take by the mouth are calomel and the earthy and alkaline sulphites. The application and powers of the former drug are well known.

The sulphites are non-irritating and extremely efficient, given in the form of sodium and magnesium sulphite, $1\frac{1}{2}$ to 2 drachms in a pint of water, taken in divided dose, or as a powder, 5 to 8 grains.—*Therapeutic Gazette.*

PILOCARPIN IN CROUP.

Dr. Sziklai strongly recommends the use of pilocarpin as a specific in all cases in which the mucous membrane becomes covered with a transudate apt to coagulate. The abundant secretion of mucus produced by the pilocarpin tends to loosen the fibrinous exudate adherent to the membrane, and it is readily expelled from the larynx. The pilocarpin not only assists in dissolving and removing the membrane present, but also tends to prevent its reforming. It can be administered to children from 1 to 3 years old in doses of 0.01 to 0.03 grammes; 3 to 6 years 0.3 to 0.04 grammes; 6 to 10 years 0.05 grammes; 10 to 15 years 0.06 to 0.07 grammes; adults 0.07 to 0.1 grammes. The author concludes as follows:

- (1) Pilocarpin is a specific for croup.
 - (2) The therapeutic action of pilocarpin manifests itself almost immediately; the cure of croup follows in a few hours; pneumonia is cured in two or three days.
 - (3) The effect is the same, whether the remedy is administered subcutaneously or by the mouth. In case of necessity one may have recourse to suppositories or vaginal bougies.
 - (4) Subconjunctival injections are preferable to other methods where there is imminent danger of death, or where the membrane is very extensive.
 - (5) Pilocarpin not only abridges the course of the disease, but prevents a fatal issue.
 - (6) Administered early it also acts as a prophylactic.
 - (7) It can be administered in twice the official doses without danger.
- Wien. Med. Wochenschrift.*

A NEW METHOD OF APPLYING LEECHES.

The leech is placed in a large test tube partly filled with water. The open end of the tube is then placed against the part, when the leech promptly fixes itself to the skin.

THE TREATMENT OF FAVUS.

Having found that the growth of the favus fungus was killed by heat at 45 degrees to 50 degrees C. (113 degrees to 122 degrees F.) applied to cultures of the same, F. Zinsser has treated five cases of favus by means of heat at 113 degrees F., generated by passing hot water through a properly fitting coil. Beneath the coil there is a compress, saturated with bichloride solution, about 1 to 2,000. All but one of the cases were cured in a short time, apparently radically. The heat was applied continuously for twelve hours.—*Archiv. Derm. u. Syph. ; Times and Register.*

THE EFFECT OF THE LOCAL APPLICATION OF GUAIACOL IN THE
REDUCTION OF THE TEMPERATURE IN TYPHOID FEVER.

McCormick has written a paper on this subject, and, in summing up the article, says he is convinced of the following facts :

(1) That guaiacol when locally applied is certain to reduce temperature.

(2) That with the care that a physician should always use in the administration of drugs, it is absolutely safe.

(3) That chills will not occur if the temperature is not reduced below 100° F.

(4) That no deleterious effect is produced upon any of the organs by its use.

(5) That it is easy to apply, and can be used by any one competent to nurse a typhoid fever case.

(6) There are no depressing effects following an intelligent use of the drug.

(7) That by continued use the dose can be gradually lessened.

(8) That it is far superior to the cold bath ; that it can be used by one person ; that no appliances are necessary for its use that are not obtainable in every home ; that it is much more pleasant to the patient ; that it is fully as effective ; that patients are not subjected to the danger of moving, and they offer no resistance to its use.

McCormick has thoroughly tried the bath and cold packs, and knows that they have proved very efficacious in many cases, but with his experience with guaiacol has no desire to return to either of them.—*Medical News ; Therapeutic Gazette*.

ANTISTREPTOCOCCIC SERUM IN PUERPERAL SEPTICÆMIA.

Jacquot (*Presse Méd.*, May 18) communicated to the Société de Biologie the case of a woman attacked by puerperal septicæmia in which intra-uterine injections and quinine were without effect. The symptoms persisted, and the evening temperature reached 40.8° C. He then injected 30 c.cm. of Roger and Charrin's antistreptococcic serum. The same evening the temperature fell to 37° C. After three injections of the serum the patient seemed well, when, three days later, her mother contracted facial erysipelas. This seemed to be the origin of a new infection, for in two days the convalescent had a severe rigor and the temperature again rose to 40° C. Only one other injection of the serum, however, was required to arrest the process, and there was no further relapse. Jacquot remarks that this case, while showing the favorable action of the serum in puerperal septicæmia, and notably on the temperature, further illustrates the reciprocal relationship which exists between this disease and erysipelas.—*Epitome of Current Medical Literature*.

HOW SHOULD HYDROCHLORIC ACID BE EMPLOYED IN DISEASES OF THE STOMACH ?

Huchard (*Journal des Praticiens*, February 16, 1895) considers that this acid is capable of exercising a double action upon the digestion—1, an enpeptic action ; 2, an antiseptic action. As an enpeptic, it should be employed in hypochloric cases, in chronic gastritis, in cancer of the stomach, in pyrexias, in pulmonary tuberculosis ; in a word, in all cases in which the digestive power is diminished and the amount of gastric juice is lessened. The following is the method of administration :

R.—Acid hydrochlorici.....*mxv*.

Aq. dest.....*f℥viii*.

Sig.—A wineglassful towards the end of each meal and one-half hour after.

Or,

R.—Acid hydrochlorici.....*mxlv*.

Aq. dest. . . :*f℥ixss. M.*

Sig.—A tablespoonful in half a glass of warm or cold water at the end of each meal.

The contraindications to the employment of this drug are all forms of hyperchloride acidity, in ulcer (round) of the stomach, in dyspepsias accompanied by hyperæsthesia. The treatment should not be continued for more than three weeks or a month, to be continued, if necessary, after a remission of fifteen days. As an antiseptic it has produced good results, in which fermentation has been produced with pyrosis due to the formation of organic acids, in dilatation of the stomach, etc. It should be given in these cases two or three hours after the meal.—*Therapeutic Gazette*.

LOEFFLER'S SOLUTION IN THE TREATMENT OF DIPHTHERIA.

The solution consists of :

Alcohol, 60 parts.

Toluol, 36 parts.

Liq. ferri perchloride, 4 parts.

For the relief of pain menthol may be added. The infected patches are to be swabbed with this every two to four hours.

ANTIPYRIN IN PRURITUS.

F. Arnstein (*Gazeta Tekarska*) reports two severe cases of pruritus successfully treated by antipyrin. One of the cases was the mortenale senile form. The antipyrin was administered at bedtime, in gramme doses.

OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

Professor of Obstetrics in the University of Toronto; Obstetrician to
the Toronto General Hospital.

ASSISTED BY

H. CRAWFORD SCADDING, M.D.,

Physician to Victoria Hospital for Sick Children.

A METHOD OF PREVENTING THIRST FOLLOWING CÆLIOTOMY.

Dr. William H. Humiston, of Cleveland, O., explains his method as follows (*American Journal of Obstetrics*): The patient should have the usual preparation for cœliotomy—*i.e.*, diet, daily baths, cathartics, etc. For three days prior to operation, order the patient to drink one pint of hot water an hour before each meal and on retiring, thus drinking two quarts of water each twenty-four hours, *the last pint to be taken three hours before the time set for operating*. Do not omit to give the water the day previous to the operation, while the patient is restricted to a limited amount of liquid nourishment and the bowels are being unloaded. We thus restore to the system the large loss of fluid occasioned by the free catharsis, and we have the great satisfaction of seeing our patient pass through the trying ordeal of the first thirty-six hours after the operation in comparative comfort, with no thirst, a moist tongue, and an active renal function.

TUBAL ABORTION.

Muret (*Rev. des Sc. Méd.*, April, 1895) discusses this subject. The termination of tubal pregnancy during the early months is little recognized, but is nevertheless frequent, and perhaps more frequent than rupture of the gravid tube. Complete tubal abortion takes place all at once. The ovum is expelled into the abdominal cavity with corresponding symptoms more or less marked. Uterine decidua are expelled, and an intraperitoneal hæmatocele is formed. Then resolution occurs, and there is no repetition of the onset. Tubal abortion should be considered a favorable termination of tubal pregnancy, not requiring operation and capable of diagnosis. If the abortion be incomplete, part of the ovum

is retained in the tube, and a tubal mole is formed. As in incomplete uterine abortion, so with incomplete tubal abortion, hæmorrhage occurs repeatedly till the oviduct is evacuated. The blood effused in the tube empties itself into the abdominal cavity, through the patent ostium abdominale, and forms a hæmatocele which gradually increases. The symptoms of incomplete tubal abortion are tubal colic, the expulsion from the womb of decidua without chorionic villi, and repeated attacks of intermittent pain with symptoms of internal hæmorrhage. Locally, there is perceived first a swelling of the tube, and then the development of a gradually enlarging tumor. At first the symptoms of anæmia are much less serious and less acute than in the case of rupture of a gravid tube. Sometimes a very considerable thinning of the tubal wall takes place at the summit of the insertion of the tubal mole, and Muret thinks that this may be due to the fact that at first hæmorrhage is localized between the ovum and the wall of the tube, and that in this way rupture of the tube might be caused even though the ostium abdominale were patent. In incomplete tubal abortion abdominal section is always indicated.—*Epitome British Medical Journal.*

SURGERY

IN CHARGE OF

L. M. SWEETNAM, M.D. Tor.,

Lecturer on Therapeutics in the Woman's Medical College; Surgeon to the Outdoor Clinic, Toronto General Hospital; Surgeon to St. Michael's Hospital;

AND

A. PRIMROSE, M.B., C.M. Edin.,

Surgeon to the Hospital for Sick Children, etc.

THE ADMINISTRATION OF THE ANÆSTHETICS PRACTICALLY CONSIDERED.

In a recent issue of the *Therapeutic Gazette*, Dr. F. M. Strouse urges that better protection be given those to whom an anæsthetic is given.

We are at one with him when he protests against the selection of a student or recent graduate to act in this capacity, and feel that, when at all possible, one should be chosen who has given the subject more than ordinary attention.

To the careful surgeon, it is gratifying to see the anæsthetist enter upon his work fully equipped with the necessary apparatus for all emergencies.

A case containing the following articles is considered by the writer indispensable: Allis' ether inhaler and ether bottle (graduated), Esmarch's chloroform inhaler and chloroform bottle (graduated), hypodermic syringe and tablets of morphine, morphine and atropine, atropine, strychnine, digitalin, and nitro-glycerin, whiskey and aqua ammonia F., mouth-gag, throat sponge-holder and small sponges, catheter, pocket-case, and tracheotomy tubes. By many the battery is considered an additional safeguard, although the writer has found little or no use for it.

A transfusion apparatus may be among the emergency instruments when, from the character of the operation and the condition of the patient, it is deemed prudent.

The hypodermic syringe should be perfectly clean and in good working order, and the catheter likewise thoroughly aseptic.

When time permits, the attending physician should never fail to have the urine analyzed.

The following history, when obtainable, is always appreciated by the anæsthetist:

The age, physical condition, including organic or functional trouble temperament ; if addicted to alcoholic excess ; has an anæsthetic been previously administered ? if so, which of them, and its effect at the time.

Food must be abstained from for several hours.

Whiskey may be given at short intervals prior to operating, and peptonized enemata also when the condition of the patient requires it.

By speaking encouragingly and assuring the patient that the anæsthetic may be inhaled with perfect safety, confidence is often promptly obtained. It is not considered wise to inform the patient that there is any danger to be anticipated from its administration.

The heart and lungs are examined, the arteries for atheroma, the cornea for senile arc, the artificial teeth removed and the fauces inspected, the clothing loosely and comfortably arranged, and the head placed nearly, or quite on a level with the body ; and, to readily notice the respiratory movements, it is best to have little covering on chest and abdomen, but always sufficient for protection.

One of the finest accomplishments is the knowledge how to properly handle the patient. Patience and gentleness are the noteworthy requirements, and with their aid one is promptly and safely brought to the stage of unconsciousness, a decided contrast to the rough handling of a frightened, struggling patient, usually the result of "pushing" the anæsthetic.

Ether, the safer anæsthetic, is to be employed when it is but a matter of choice.

The patient is asked to use his best effort to refrain from interfering. He is permitted to breathe a few times through the dry inhaler ; then about a teaspoonful of ether is poured upon it, holding it at a distance from the face, and, as the inhaler is gradually brought close to the face, ether is added in small quantities. If the patient requests it, the inhaler is removed for a breath of air. In a short time the inhaler may be kept permanently in position.

The nervous or hysterical patient, or one exhausted from chronic invalidism, is the seemingly unmanageable one, and it is here that gentleness and tact demonstrate their superiority.

However, at times are found those that are positively uncontrollable ; some may have taken ether the usual way, and fear a repetition of the same methods. It is best then to place ether and inhaler temporarily aside and use chloroform until the patient is unconscious. When the exciting stages are encountered and restraint becomes necessary, pressure should not be applied to the chest ; it is simply required to hold the shoulders and lower extremities.

To the writer the best results are obtained by keeping the inhaler applied to the face throughout, if possible, and using the ether in drops,

thereby maintaining a uniform condition. If the inhaler is placed aside from time to time, the patient is liable to become semi-conscious and embarrass the operator. With insensitiveness of the cornea, anæsthesia is most generally obtained.

When disturbances present themselves they are usually respiratory. Regular abdominal movements assure us that the respiration is satisfactory, but irregular abdominal movements denote irregular diaphragmatic action.

The hiccough-like, the stertorous, and the wheezing breathing are all signs that the danger line has been reached, and in any of these conditions the face may assume a purplish hue, denoting deficient aeration.

The slightest irregularity of respiration demands prompt action. Ether is, first of all, dispensed with, and that may suffice to bring about the natural order of things. When active measures become necessary, they are, in regular order, pressing the jaw forward from behind the angles, separating the jaws and rhythmical traction on the tongue, dilatation of sphincter ani, artificial respiration, respiratory stimulants, and, finally, the battery.

Recent laboratory and clinical studies have proved that chloroform kills most frequently by failure of the respiration; nevertheless, we know that the heart is often easily overcome, and it behooves us to be ever-watchful of its behavior.

Chloroform should never be forcibly administered, for with resistance there are always exaggerated respiratory movements, and there may be rapid absorption of a large quantity of chloroform, and alarming symptoms, with no previous warning.

It is essential that the head be placed low during anæsthesia, and especially when chloroform is used, for here we have cerebral anæmia as a physiological result.

With the bottle, whereby chloroform may be used drop by drop, the inhaler may be retained in position during the entire operation.

The same unpleasant manifestations are liable to occur as with ether, and are usually more prompt in presenting themselves.

It is often a difficult and dangerous matter to commence anæsthesia in a patient addicted to alcoholic excess, and it is here that bromide of ethyl proves its value; a drachm or two on the inhaler and the patient promptly relaxes, after which it is best to prolong the narcosis with chloroform.

The A. E. C. mixture is about as unpopular as it is unscientific, and is considered by many men of experience an unsafe combination.

Vomiting occurs as frequently with chloroform as with ether, and post-operative vomiting usually after ether. Morphine is sometimes administered to prevent vomiting, but seems to have little or no power in that respect, and is likely to induce vomiting, post-operative.

The surgeon is to be promptly informed of an approaching attack of vomiting, for, owing to the straining effort, much harm may be done at times if the field of operation is not protected.

Mucus can usually be removed from the pharynx with a small sponge attached to a holder. A large quantity of ropy mucus may embarrass respiration, and, if necessary, vomiting may be induced by tickling the fauces or permitting the patient to partially recover.

The pupil should be contracted and respond to light. Marked dilatation following contraction is a danger signal and a warning to discontinue the anæsthetic.

The frequent tapping of the cornea is uncalled for. It is sufficient to elevate the upper lid, when, with returning reflex, there will be an unconscious effort to close the lids.

At the termination of all operations, whether they be trivial or serious, the anæsthetist must be fully assured of the satisfactory condition of the patient before leaving the room.

To hasten anæsthesia, hypodermic injections of morphine are often given; it may do so, but as frequently prolongs the narcosis unnecessarily.

The preference for a particular ether inhaler is usually the result of one's experience, and the writer has used the Allis with marked satisfaction, and finds that there is very little waste of ether with its use.

GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

EDMUND E. KING, M.D. Tor., L.R.C.P. Lond.,

Surgeon to St. Michael's Hospital; Physician to House of Providence and Home for Incurables; Pathologist, Toronto General Hospital.

ICHTHYOL IN FISSURES OF THE ANUS.

Van der Willigen warmly commends ichthyol in the treatment of fissures of the anus (*Journ. de Méd.*, No. 32, 1894; *Monatshefte für Praktische Dermatol.*, No. 10, 1894). The pure drug is introduced into the anus by a brush. The contraction of the sphincter forces this into all the folds of the mucous membranes. Little pain is excited. Treatment should be repeated daily. The patient is given liquid diet, and occasionally castor oil. The first patient, who had previously been treated by every means short of operation, was cured in eight days, the other three in two or three weeks. One had already been subjected to operation without benefit. There was no recurrence.—*Therapeutic Gazette*.

LATENT GONORRHOEA IN THE FEMALE.

Dr. W. R. Pryor (*Med. Surg. Bull.*) states that after normal delivery and a normal puerperium he often observed an acute gonorrhœal endometritis. The explanation was that the labor caused sufficient bruising to render the tissues susceptible to the influence of the gonococcus. In his opinion a latent gonorrhœa in women may become acute by any process which will reduce the vitality of the tissues. He also believes that purulent-urethritis and endocervicitis in the overwhelming majority of cases are due to gonorrhœa. As to the treatment he remarks as follows: "In the urethra I use strong solutions of nitrate of silver—thirty grains to the ounce. For gonorrhœal endocervicitis I have given up the use of carbolic acid or chloride of zinc, preferring the use of as strong a solution of iodine as I can obtain. It is more potent in this locality than any preparation of chlorine. For chronic vulvitis I use nitrate of silver. Chronic vaginitis I treat in the same way, except that I keep the vagina packed with iodoform gauze. In very young children affected with gonorrhœa of the

genitalia, I have frequently been compelled to use only a saturated solution of boric acid. The prevalence of gonorrhœa in the female I believe is not due to neglect in treating the male, but to the difficulty of reaching and treating it in the female. Women who contract gonorrhœa usually stop treatment as soon as the acute and painful symptoms disappear.

ORIFICIAL SURGERY

Dr. J. M. Mathews (*Mathews' Medical Quarterly*, January, 1895) in an article on "Some Points in Rectal Surgery," refers to the subject of orificial surgery as follows :

At the International Medical Congress at Washington, I had the honor of reading a paper the title of which was, "The Anatomy of the Rectum in Relation to the Reflexes." In that paper I endeavored to show that much elucidation could be thrown upon many suspected diseases by tracing their origin to disease in the rectum. I meant only to convey the idea that many reflex symptoms could be made manifest through the nerve distribution from the affected part to the distant parts of the body. The idea herein inculcated has been run away with in a wild manner by the so-called orificial surgeons, who are in the habit of removing an inch or two of the rectum for the most trivial cause of self-imagined reflex. I wish here to enter a most vigorous protest against this abominable practice. Such practice cannot be too severely condemned by the medical profession, for in its wake lie many wrecked and wretched bodies.

ACUTE GONORRHOEAL RHEUMATISM.

Dr. Howard Lilienthal has a preference for oil of wintergreen and sodium bicarbonate, with considerable attention to the alkalies, in the treatment of this disease. The diseased joint should at once be put at rest upon a splint of such proportions that as much comfort as possible may be obtained. Gentle compression over a dressing of ichthyol ointment twenty to fifty per cent., or over mercurial ointment, or over an ordinary wet dressing, should be applied by bandage. If the disease seems to be manageable, gentle massage is valuable during convalescence ; but if ankylosis is inevitable, it should be assisted by perfect fixation in plaster of Paris. The indication is for forced feeding ; meat, eggs, milk and its preparations, besides other simple and easily digested food, should be forced upon the patient every two hours or oftener, and accurate record should be kept of all nourishment taken.—*Boston Medical and Surgical Journal*, 1895, vol. cxxxii., p. 75.

THE TREATMENT OF URIC-ACID GRAVEL.

Dr. Vaughan Harley states that the treatment takes two directions, according as we desire to increase the solubility or decrease the amount of uric acid formed. In the majority of cases uric acid deposits are due to an increased tendency to precipitation, and not to excessive formation. In cases due to an increased tendency to precipitation drugs which help to hold uric acid in solution should be given. Piperazin has been found to be of service in those cases in which gravel has been due to diminished solvents and not to excessive formation, but it has no action whatever on the quantity of uric acid daily formed in the organism. In such cases it should be given with alkalies, as the alkaline waters or potassium bicarbonate, combined with the iodides, and the alkalies should be given at bedtime. Here the diet is not of so much importance except in favor of salines and vegetables. If there is excessive formation, a carbohydrate diet is the most useful. Starch, sugar, and vegetables should, therefore, be the staple diet, and meat and fish in only small quantities. Sugar does not cause an increase of uric acid, but alcohol does, and, therefore, should be prohibited. Quinine and arsenic decrease the quantity of uric acid, because they diminish the quantity of leucocytes, and, therefore, in cases where gravel is due to excessive formation of uric acid, they are most valuable. While moderate muscular exercise is of service, excessive exercise is harmful. In cases of excessive formation, although alkalies are of some assistance, they, like piperazin, are of only secondary importance by increasing the solubility of the uric acid formed.—*British Medical Journal*.

PROSTATIC ABSCESES.

Casper, at the meeting of the "Hufeland'sche Gesellschaft," November 22, 1894 (*Allg. Medicin. Central Zeitung*, No. 97), presented the following treatment:

The presence of pus, fever, and retention are indications for immediate interference. The fact that occasionally spontaneous retrogression and absorption occurs, as shown in a case of the author's that refused operation, does not militate against the general rule.

Three methods are available: the abscess can be opened from the rectum; or from the perinæum; or, following Dittel, the intestines may be separated from the gland by a pre-rectal incision, and the prostate then incised. Our choice depends on the nature of the case. If suppuration is abundant and the abscess prominent, incision through the rectum or perinæum is indicated. Casper did the former operation eighteen and the latter three times. In the latter cases there was a large perineal projection, the skin over which was reddened and thinned.

To reach the deeper-seated abscesses from the perinæum would mean the performance of a median section, and this is the less justifiable, as there is the greatest danger of dividing the ejaculatory ducts and causing sterility.

If the tumor projects mostly into the rectum, the opening should be made from the cavity. Dittel's operation is suitable for the remaining cases, in which neither perinæum nor rectum shows a marked fluctuating tumor.

The objections that have been made to the rectal operation are that it cannot be done antiseptically, and that there is danger of hæmorrhage, pyæmia, and fistula formation. These may be avoided by the following measures: The narcosis must be deep, to overcome, as far as possible, sphincteric resistance. The trivalve speculum gives a suitable and well-exposed operation field. After thoroughly cleansing and irrigating the latter, the rectum above is thoroughly closed with an iodoform gauze tampon. An incision is then made down into the gland, and by bilateral pressure the pus that it contains is squeezed out. A drainage tube is then put in, which projects out of the anus. The rectum is irrigated three or four times daily. In three or four days the drainage tube is removed and the wound allowed to heal.

Hæmorrhage is not to be feared, as the operator has an open field. Fever and other complications occurred in none of the writer's cases. The fistula heals spontaneously, or can easily be closed by operative procedure. Pyæmia may be excluded, since after the lapse of several days infection can hardly occur. Before the operation laxatives are to be given, and after it opium.

Little can be said of the treatment of peri-prostatic abscesses and phlebitis paraprostatica. The former calls for rectal incision; the latter leads to pyæmia, and must be treated in the usual symptomatic and fruitless way.—*International Journal of Surgery*.

[NOTE.—It is well to bear in mind that many symptoms that point to an abscess in the prostate may arise from an inflammation of the seminal vesicles—when the *abscess* points in the rectum that it may be a much-distended vesicle. Abscess of the prostate is a rare disease, while vesiculitis is fairly common. Those so-called spontaneous emanations of prostatic abscess through the urethra are most likely a distended vesicle emptying itself through the easiest route.—E.E.K.]

GYNÆCOLOGY

'IN CHARGE OF

JAMES F. W. ROSS, M.D. Tor.,

Lecturer in Gynæcology in the Woman's Medical College; Gynæcologist to St. John's Hospital, Toronto General Hospital, and St. Michael's Hospital.

A MODE OF MORE EASILY AND RAPIDLY DILATING THE CERVIX OF THE UNIMPREGNATED UTERUS.

Dilatation of the unimpregnated uterus is necessary chiefly for two purposes, namely, for the treatment of certain cases of dysmenorrhœa, and in order to examine the uterine cavity with the finger for diagnostic purposes. The object of the following short paper is not to estimate the value or utility of dilatation, or to consider in what cases it should be done, but to point out that when it is done for either of the above reasons the time chosen should be the last day of the menstrual period, just when the discharge is ceasing or has ceased. The directions given as to the best time for dilatation in text-books, if any are given (and usually there are none), are to dilate between the periods, and this, I believe, is the universal practice, and it is the one I myself always at one time followed. I have generally dilated with smaller-sized Hegar's dilators until some resistance is met with, which usually occurs when Nos. 9 or 10 are reached. Then a large laminaria tent is introduced, or possibly two or even three smaller ones. On the next day the dilatation is completed by the larger-sized Hegar's, and, if a most unyielding os internum is met with Reid's screw dilators are employed. I believe, however, that this plan is a mistake as to the time chosen, and, as a sequence of this, a mistake as to the mode of operating.

The os internum between the periods firmly resists dilatation, and only yields to considerable force. All who have tried the use of laminaria tents must be familiar with their appearance when withdrawn, showing a narrow ring corresponding to the tight undilated os internum, all the rest of the tent being fully expanded. Moreover, as stated, it takes two sittings on consecutive days to dilate with tents and dilators, and even then it is often very imperfectly accomplished. Not infrequently a rise of temperature and rigor will follow the introduction of a tent, and the continuance of these symptoms with pain may necessitate its early removal.

Rapid dilatation without tents in the intermenstrual interval must necessarily be imperfect, for if done by Hegar's, or Galabin's, or Duncan's dilators, great upward pressure is required to introduce them when the larger sizes are passed, and this pressure may be, and frequently is, so great as to cause the vulsellum or hook used to steady the anterior lip of the uterus to lacerate it, and possibly tear out. If the dilatation is begun with Hegar's dilators, and continued with Reid's screw dilators, the power is so great that the narrow parts must yield; this, however, cannot be called dilatation, but stretching, and is probably accompanied by minute lacerations of tissue. Unless the dilatation, in whatever way it is done, is thorough, a permanent cure does not result in dysmenorrhœa, and is insufficient to admit the finger, if diagnosis is the object.

Many years ago I found out, accidentally, that if the dilatation is done on the last day of the period, just when the discharge has ceased, the parts are perfectly elastic and soft, and have very little resisting power. Hegar's dilators can in many cases be passed in, one after the other, until No. 17 is reached. This admits of the passage of a medium-sized index finger. An anæsthetic is necessary, as the patient would not remain sufficiently quiet. Two Sim's hooks close together, so that the handles are held as one, are better than a vulsellum. They hold better, and are less likely to scratch the operator's finger. This process should be done leisurely, but it does not take above twenty minutes. The smaller sizes of the dilators should have the terminal inch a little curved forwards, and less in size, so as to enter more readily.

This plan opens up quite a vista of utility in other cases than those of dysmenorrhœa; for instance, it is often next to impossible to examine with the finger the interior of the uterus of a sterile woman over forty. The parts absolutely refuse to dilate sufficiently. But by dilating on the last day of the period it can be done very easily. Every uterus does not yield so readily as described, and, indeed, now and then a tough cartilaginous os internum is met with, which almost refuses to yield at all, but even this is more dilatable than it would be in the intermenstrual interval.

A very interesting case of menorrhagia was recorded some years ago which had been under two of the most eminent men in the country, and in which subsequently the womb was removed entire on the Continent. It was then found that the cause of the hæmorrhage had been a small fibroid not as large as a boy's marble. This had never been diagnosed.

Another case was read before one of the London societies, in which vaginal hysterectomy was performed in consequence of incurable hæmorrhage. It was thought to be cancer of the uterine cavity; but, on examination of the uterus after removal, the cause was found to be a small fibroid polypus projecting into the cavity near one cornu. In these cases, if the

finger could have been inserted for examination, no doubt it would have been.

By adopting the plan recommended such examinations become easier, although such small fibroids, and so situated as in these two cases, must always be very difficult to diagnose. Much assistance is given by curving the intra-uterine finger well forwards and pressing the fundus down upon it by the right hand outside. For this purpose the patient should lie on her left side, as the recti muscles are thereby relaxed. It might be supposed that the anæsthetic would cause sufficient relaxation; but it often does not.

In conclusion, the advantages of the plan recommended are :

- (1) Danger from sepsis by the use of tents is avoided.
- (2) Inflammation, if rise of temperature with rigors and much pain indicate it—traumatic rather than septic—is also avoided.
- (3) The process, both to patient and operator, is more easy, and is incomparably quicker.
- (4) Less structural injury is done to the parts, as they dilate more kindly and without much resistance.
- (5) The dilatation is more complete and perfect, so that if used for dysmenorrhœa a permanent cure is more likely to result, and, if for diagnostic purposes, examination is possible in cases in which otherwise it would have been impossible.—*James Braithwaite, M.D., in British Medical Journal.*

PÆDIATRICS AND ORTHOPÆDICS

IN CHARGE OF

W. B. THISTLE, M.D., L.R.C.P. Lond.,

Assistant Demonstrator of Anatomy, University of Toronto; Physician to Victoria Hospital for Sick Children; Clinical Lecturer on Diseases of Children in the Woman's Medical College.

AND

B. E. MCKENZIE, B.A., M.D.,

Lecturer on Orthopædics and on Surgical Anatomy in the Woman's Medical College, and Surgeon to the Victoria Hospital for Sick Children, Toronto.

ORTHOPÆDIC SURGERY.

Dr Henry Ling Taylor, of New York, writes of Infantile Scorbutus. Some have considered this condition due to the use of sterilized milk. At the age of six to eighteen months the baby begins to fail in health—grow peevish, restless, and sensitive, and develops a peculiar cachexia, characterized by a dusky complexion and emaciation. The gums are usually dark, swollen, and spongy. There may be ulceration, bleeding, and fetor.

The general sensitiveness becomes so marked that the child is handled with great difficulty. At the same time fusiform swellings, due to the effusion of the blood beneath the periosteum, appear near the hip, knee, or ankle. These are very sensitive, but are devoid of local elevation of temperature. There may be fever in acute cases.

A simple change of diet to raw or pasteurized milk, with the juice of an orange and a little raw beef juice daily, produces rapid improvement unless some accident, such as the separation of an epiphysis, has occurred.

The cause of the disorder is clearly to be found in the diet.

The pseudo-paralysis is one of the most striking of the limb symptoms.

The trunk and other extremities may also be affected. The limbs and trunk usually lie motionless; the head and arms can generally be moved, and handling causes acute suffering.

The pseudo-paralysis is not wholly due to prostration, nor is it entirely explained by the local hæmorrhages, nor is it any essential paralysis, for the knee-jerks are normal, and recovery may take place in a few days.

It is suggested that movement is inhibited by the sensitive and damaged condition of the muscles and their insertions, or that malnutrition of the nerve centres from impoverishment or toxicity of the blood is the cause of the pseudo-paralysis.

The muscular rigidity might also be due in part to reflex action from joint irritation, or from peri-articular or intra-articular swellings.

They may be easily distinguished from other infantile paralytic affection by the hyperæsthesia and accompanying symptoms of the scorbutic dyscrasia, by the normal knee-jerks, and by its speedy subsidence and anti-scorbutic diet.—*Trans. Amer. Orth. Assoc.*, vii., p. 129.

NOTE.—The following are some of the references to the literature of this interesting subject :

Amer. Medical Surg. Bull., Feb. 1, 1894.

“ “ “ “ March 15, 1894.

N. Y. Medical Journal, Dec. 12, 1891.

“ “ “ “ Dec. 12, 1894.

Keating *Cyath. Dis. of Children*, Vol. II.

Lancet, Sept. 30, 1893.

Practitioner, June, 1893.

ETIOLOGY OF RICKETS.

Hagenbach-Burckhardt (*Berl. klin. Woch.*, May 27, 1895) discusses the etiology with special reference to rickets being an infective process. Theories attributing the disease to deficiency of lime salts, to lactic acid, are no longer tenable. Kassowitz, under certain circumstances, is disposed to admit various micro-organisms as the cause of rickets. Poisons due to micro-organisms can readily be supposed to set up the lesions found in the disease. The temperate zone is the one in which rickets abounds. The cases of rickets increase at the beginning of the cold season, when children are kept in the house. The greater the altitude, the less frequent is rickets. The infective theory would explain the prevalence of the disease in vitiated, and its infrequency in pure, atmospheres. Both rickets and tuberculosis are most developed in large towns and in notoriously unhealthy streets. Enfeeblement of the individual by acute or chronic disease predisposes to both diseases. Measles also predisposes to both. In early age chronic infective processes are frequently localized in the bones. There is nothing in the clinical picture of rickets against the view of its being an infective disease. Acute rickets is known. The spleen is frequently enlarged. The objections to the view are that no micro-organism has been found, and that similar changes in bone may be produced experimentally in animals by withholding lime salts. The

author thinks that the disease set up in this way is not identical with rickets, nor does he think that foetal rickets has been shown to be identical with the ordinary disease. He would look upon defective feeding, vitiated atmospheres, acute and chronic infective diseases, as predisposing causes only.—*Epitome British Medical Journal*.

BILIARY CIRRHOSIS IN CHILDREN.

Seven cases are reported by Gilbert and Fournier (*Rev. des Mal. de l'Enf.*, July, 1895). These seven cases presented all the symptoms observed in the adult; but, in addition, in many instances there was hypertrophy of the spleen. So marked is the splenic enlargement that in cases where there is not great enlargement of the liver the true nature of the disease may be easily mistaken. The writers believe that this associated enlargement of the spleen is peculiar to cases of biliary cirrhosis commencing in childhood. A further peculiarity of the affection as seen in children is the frequency with which clubbing of the fingers may be observed. In some instances there was enlargement of the ends of the femur and tibia. The backward and stunted appearance of the affected children indicates the influence of the disease on the general nutrition.

CONDENSED MILKS.

The commission appointed to examine into the milk supply of London have discovered that in the case of condensed milk by far the greater number of brands are prepared entirely from skimmed milk. In all, seventeen brands of milk were examined by Dr. Dyer and Mr. Cassal. Out of this number fourteen were found to be prepared from skimmed milk, and showed an average of 0.72 per cent. of fat. Three brands prepared partly from skimmed milk show an average of 3.14 per cent. of fat.

Genuine condensed milk, prepared from milk in its entirety, should contain from ten to twelve per cent. of fat.

In the present state of the law, as interpreted by the judicial authorities, condensed skimmed milk, that is to say, milk deprived of one of its chief constituents, may lawfully be labelled "condensed milk," although when sold uncondensed it must be distinctly stated at the time that it is skimmed milk.—*British Medical Journal*, July 27, 1895.

PATHOLOGY

IN CHARGE OF

JOHN CAVEN, B.A., M.D., L.R.C.P. Lond.,

Professor of Pathology, University of Toronto and Ontario Veterinary College; Pathologist
to Toronto General Hospital and Home for Incurables.

ASSISTED BY

JOHN A. AMYOT, M.B. Tor.,

Demonstrator of Pathology, University of Toronto; Assistant Surgeon to St. Michael's
Hospital; Physician to House of Providence.

UPON THE BIOLOGY OF THE BACILLUS OF TETANUS.

Righi (*La. Rif. Med.*, 1894, No. 205) asserts that he has been able to secure the growth of the tetanus bacillus *aerobically*. The process by which this was accomplished was the transplantation of the highest part of old agar-agar puncture cultures. In the highest parts of these the bacilli were accustomed to a certain amount of diffused oxygen, and by the frequent transplantations readily allowed themselves to be introduced gradually to the free atmosphere. By this means, Righi secured aerobic growths upon agar-agar and upon gelatin.

MIXED INFECTION IN PULMONARY TUBERCULOSIS.

Notwithstanding the proof of Fränkel and Troje (*American Journal of the Medical Sciences*, June, 1894, p. 744) that the tubercle bacillus alone is quite competent, under proper conditions, to produce pulmonary tuberculosis of the most diffuse nature, the impression has steadily grown that in very many cases of phthisis a "mixed infection" occurs at some time in the course of the disease, and that an important rôle in determining the progress of the disease is played by the bacteria causing the associated lesions at such times. This impression has had its foundation in the frequent clinical observation of exacerbation of chronic phthisis during and after influenza, lobar pneumonia, and after the various complicating broncho-pneumonias, as, for example, after the broncho-pneumonia of measles in children. It has been suggested that, were it not for the contributing conditions of the mixed infection, the body would be able to protect itself in a very large proportion of cases from encroachment of the tubercular process. Whether this latter extreme view be correct or not, it

becomes of the greatest importance, from both prophylactic and therapeutic standpoints, to determine the germs most frequently contributing to the progress of the tubercular process, and to investigate the most efficient means of lessening their influence.

With a view to throwing light upon the first of these questions Spengler, working at the Institut für Infektionskrankheiten, in Berlin, under Koch's guidance, has examined the sputum of fifty patients suffering from phthisis, using every precaution to exclude any sources of error (*Zeitschr. f. Hygiene u. Infektionskrankheiten*, 1894, xviii., 343). Stained cover-glass preparations of the sputum, and cultures from it by both Pfeiffer's and Kitasato's methods, were carefully studied, and careful microscopic and bacteriologic examinations of the diseased organs were made in all the fatal cases. In only five of the fifty cases studied was the tubercle bacillus alone found. Three of these died, and in the lesions of all the tubercle bacillus was alone.

In nearly eighty per cent. (39) of the cases the *streptococcus pyogenes* was associated with the tubercle bacillus, and in twenty-one of these the streptococcus was believed to have been an active agent in the production of the lesions, because of its presence in large numbers in the sputum coincidentally with the occurrence of fever of a peculiar type, and because of its presence in the lesions post-mortem. In fifteen cases the streptococcus appeared to be present as a passive accompaniment of the tubercle bacillus. In these there was comparatively little fever, the progress of the cases was very slow or stationary, and in the majority the streptococci seemed to be present as a residue of an acute condition which had subsided some time previously. Eight of these cases had had the advantage of a residence at Davos, in the Tyrolean Alps; and Spengler suggests that the benefit therefrom depended chiefly upon the rapid recovery from the associated affection, the streptococci in all these cases quickly diminishing in numbers, and in several of them ultimately disappearing entirely from the sputum.

The *diplococcus pneumoniae* was found to be the associated germ in one case, and in one each the *micrococcus tetragenus*, the influenza bacillus, and the pseudo-influenza bacillus were associated with the streptococcus.

The important practical deduction from this work is that in the prophylaxis and the treatment of tuberculosis of the lungs, careful consideration should be given to the part played by the associated bacteria. Persons affected with slight or transitory inflammations of the respiratory tract should be removed as far as possible from all sources of infection by the tubercle bacillus; they should under no circumstances be placed in the same wards in hospitals with consumptives. Similarly, great care should be used to exclude from persons already affected with tuberculosis all sources of infection with the bacteria which have been shown to exert so deleteri-

ous an influence upon the progress of the disease. This would seem to be best accomplished by the removal of the tubercular patient to a high mountainous region, or to one, at all events, where the air is free from the germs of suppuration and pneumonia. And, furthermore, in the treatment of cases of phthisis, the first care of the physician should be to rid the lungs as quickly as possible of the associated bacteria, for so long as their hurtful influence continues it is useless to institute specific treatment of the tuberculosis.—*American Journal of the Medical Sciences.*

SARCOMA OF KIDNEY.

The frequency of malignant as compared with benign tumors of the kidney is notable. Sarcoma may be primary or secondary: primary usually involves only one kidney. Morris says that the only primary bilateral sarcomata of kidney are the myosarcomata *i.e.*, striped-muscle-containing sarcomas. In other cases one kidney has been infected from the other.

Rapid growth is characteristic, and this occurs along the renal vessels; the consistence is soft and vascularity is marked. A weight of several pounds is often attained. Either kidney may be affected, and the renal form is often well preserved in the growth, the capsule of the organ limiting the neoplasm also.

The connective tissues of the cortex or the subcapsular or submucous tissue are the seats of origin, and thus the growth surrounds rather than infiltrates the kidney substance.

Histologically, the round-cell varieties are more common than the spindle, and the various degenerations from which sarcomata suffer elsewhere occur here also.

The causation is obscure. Some are undoubtedly the result of ante natal pathological conditions, being congenital; the irritation caused by renal calculus is thought by some to be operative in starting growth. Traumatism is also spoken of. Really the causes are unknown.

The majority of these growths occur during the first decade of life, and sex seems to be of no account. Their course is rapid, a fatal termination often happening within a few weeks from the time when first noticed. Six weeks to six months may be taken as the usual limits of duration.

Recurrence after removal has been so constant in those that survive nephrectomy, and the danger from the operation itself so great, that Butlin, Thornton, and others advise against interference. Others (*e.g.*, the author of this paper) have had much better results, and say that operation is indicated in all cases if the patient be seen early.—*Abstract of paper by D. A. K. Steele, in Medicine for April, 1895.*

HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

WILLIAM OLDRIGHT, M.A., M.D. Tor.,

Professor of Hygiene in the University of Toronto ; Surgeon to St. Michael's Hospital

AND

E. HERBERT ADAMS, M.D., D.D.S.,

MONTREAL BOARD OF HEALTH.

The report of the Montreal Board of Health in favor of the establishment of a bacteriological department in connection with the board has given rise to much discussion as to the practical value to the city of such an institution.

Dr. Laberge, the City Medical Health officer, has prepared a report on this feature of the case and submitted it to the board.

BONE TUBERCULOSIS A FIELD OF LITIGATION.

At the recent meeting of the Mississippi Valley Medical Society Dr. Emory Lanphear read a paper on "Tuberculosis of Bone and Joints the Future Field of Litigation against Corporations," in which he advanced the opinion that, "multitudinous as have been the suits brought in the past upon the plea of concussion of the spine, they are few, indeed, as compared with those liable to be instituted as soon as attorneys and the common people come to understand the fact that slight sprains and twists lead to the development of bone and joint tuberculosis."

HYGIENE AND RACE DEVELOPMENT.

If prevention is the keynote of the medical thought of the day, it is the height of wisdom to pay heed to the sources of moral contamination. Overcrowding in cities, child-labor, unnatural and unremitting toil by the mothers, are some of the most potential of these causes, and they appeal to the hygienist and to the legislator on the basis of race deterioration and loss to the State.

The absolutely dissolute should be isolated and their labor made productive ; first, to prevent the transmission of their pernicious qualities ; secondly, to relieve the State of the burden of their maintenance in asylums and reformatories.—H. H. Longsdorf.

VOLUNTARY ADMISSION OF PATIENTS TO HOSPITALS FOR THE INSANE.

The following resolution was adopted at the session of the Medico-Legal Society held on March 13, 1895 :

“Resolved, that in the opinion of this society the adoption of a law permitting voluntary admission to the hospitals for the insane of such persons as may desire treatment therein is eminently proper and desirable, and the highest interests of the insane demand the incorporation of such a law among the statutes of the State of New York.”

ONTARIO FACTORY ACT.

The Ontario Factory Act, as amended and improved during the recent session of the Legislature, has just been published by the Ontario Government, and should have a wide circulation. There are a number of entirely new clauses. The first of these is designed to make more stringent the obligation upon employers to provide sufficient sanitary arrangements, the new act providing that where two or more persons occupy the same room or premises to carry on a business which employs in the aggregate six or more persons each of the employers shall be responsible for the sanitary arrangements of the place. The next additional clause provides that except in the business of canning or desiccating fruits no boy or girl under fourteen shall be employed in any factory. New precautions against accidents are found in section fifteen, a clause being inserted ordering the most secure guarding possible of dangerous parts of mill gearing machinery, flumes, doors, bridges, etc., while considerable latitude in ordering precautions is given to the inspectors. More stringent fire escape provisions are made, a rope being ordered for every window in a factory above the ground floor. Other clauses direct that the inspectors must be notified of explosions and injuries within twenty-four hours under penalty of a fine of \$30. The appointment of a female factory inspector is authorized, and an extra clause added to make prosecutions more effective. These are the chief amendments to the Act, which was previously a valuable charter of the rights of the workers, and it should be in the hands of all interested in the matter.

OPHTHALMIA NEONATORUM.

The statistics given by Haussman of the inmates of blind asylums made blind by this disease was : In Copenhagen, 8 per cent. ; Berlin, 20 per cent. ; Vienna, 30 per cent. ; and in Paris, among 208 blind, young subjects, 45 per cent. In 1876, among the young persons admitted to the blind institutions of Germany and Austria, 33 per cent. had been made blind by this disease.

In different countries the variation was from 20 per cent. to 79 per cent. In Philadelphia, in 1871, out of 167 inmates of the blind asylum, about 20 per cent. had been admitted for this cause.

Since prophylactic measures have been resorted to in lying-in hospitals it had the effect of reducing this number from 12 per cent. to 3 per cent. in Halle, and in Leipsic, where Crede used his own method, the cases fell from 75 per cent. to 0.5 per cent. The treatment consisted in putting a single drop of a 2 per cent. solution (gr. x to 3j of water) of nitrate of silver between the lids of each eye. Practically the same results have obtained in the United States. In the 158 inmates of the Berkeley Institute, California, of 36 cases of binocular blindness 25 per cent. was caused by blennorrhœa neonatorum.

Howe found that while from 1870 to 1880 the population of the United States had increased 30 per cent., the number of cases had increased 140 per cent., the number decreasing from the east to the west, but increasing from the north to the south.

CASTRATION OF CRIMINALS.

Several medical journals are advocating castration as the one penalty for bestiality, pederasty, and the like abominations. The arrest and imprisonment of Oscar Wilde for a "nameless crime" and the recent exposure of the perverted sexual sense among many of the British aristocracy has awakened a feeling among many that imprisonment or fine is too mild a dose for such moral debauchees.

The Ohio State Food Commission has brought ninety indictments against grocers and druggists for selling adulterated articles in their respective lines.

A case of tuberculosis of the face, the result of infection from shaving, has been reported.—*Kansas Medical Journal*.

Editorials.

RESPECTABLE MEDICAL JOURNALISM.

WE regret that in a short editorial in our last issue there appeared a slight typographical error in our *French* which has caused some confusion in certain quarters. We will now explain in simple English. The journal referred to publishes two separate editions: one on poor, cheap paper, possibly forty-five pounds to the ream, and sent free to all physicians in the Dominion—or, more correctly speaking, to as many as the limited number published will allow; a second printed on better paper, probably weighing seventy pounds to the ream, and sent to advertisers only. As to our other comments on the peculiar business methods of the combined journal, which was unanswered in its August editorial, we have nothing further to say.

For ourselves, we have to state that THE PRACTITIONER did *not* try to make a combination with the *Ontario Medical Journal*. That is not however, a matter of much importance. It appears to us far more important, as far as our patrons are concerned, to publish a good journal, and to avoid everything that is unprofessional and disreputable. We have been told that, if we copied, to some slight extent at least, the methods of the free advertising journals, we would gain some pecuniary advantages. Perhaps we would; but we decided some time ago not to make the trial, and we see no reason now for altering our decision. In fact, we have an old-fashioned idea—perhaps an outcome of our “concomitant fossilization”—that honesty and respectability are necessary for the lasting success of any medical journal.

Free journals, conducted on speculative principles in the interests of advertisers, have had a fair trial in Toronto, and have not been found satisfactory. The *Dominion Medical Monthly* and *Ontario Medical Journal*, one of the most typical of the modern free journals, brings to our attention an important fact in the following words: “Our journal is the official medium of the Medical Council.” The history of this official medium business is fairly well known. We fancy the Council itself has lately recognized that a mistake was made, but many of its members felt

that it was just that men who were carrying out a certain engagement with that body should have a fair chance to recoup themselves for certain investments necessarily connected therewith. The late transfer has removed any such sentimental considerations, and the Council has now only to consider the matter on its merits. Surely the time has arrived when the Council can decide unanimously that no reason now exists why it should adopt or officially recognize any single journal—and certainly none that has connected with it even a suspicion of unprofessionalism.

THE BRITISH MEDICAL ASSOCIATION.

WE have frequently given expression to the opinion that the British Medical Association is the greatest medical society in the world; and we are, consequently, quite ready to endorse the statement made in the *British Medical Journal* to the effect that the recent meeting was the "greatest medical assembly that our profession has ever known." The *Journal* goes on to say: "We do not forget the great International Congress; . . . in mere numbers, for aught we know, some of these meetings may have surpassed the Association meeting of this week. English medicine has, however, this week shown itself in numbers vast enough to fire the most sluggish imagination; while, on the other hand, the age, standing, and prosperity of our Association give a unity, a dignity, and an impressiveness to its chief assemblies which are wanting to the more or less motley and fortuitous gatherings which have not a national character."

Among the visitors were many physicians from Canada and the United States, including the following: Drs. Walter B. Geikie, Wm. Oldright, H. A. Bruce, J. H. Cotton, D. N. McLennan, N. M. Harris, and C. W. Thompson, from Toronto; Drs. I. H. B. Allan, T. Johnson Alloway, George E. Armstrong, H. S. Birkett, D. Macrae, and Sir William Hingston, from Montreal; Drs. K. N. Fenwick and N. R. Henderson, from Kingston. There were about seventy-five from the United States. We understand that these visitors were, as a rule, well pleased with the treatment they received from the British physicians and surgeons, and were, at the same time, much interested in the proceedings of the meeting.

THE CANADIAN MEDICAL ASSOCIATION.

THE meeting of the Dominion Medical Association recently held in Kingston was a very satisfactory one in all respects. We have no recollection of any meeting of the association when the different provinces of Canada were better represented. One hundred and

ten members signed the register. This may be considered a fairly good number, especially when we consider the fact that at the last meeting held in Kingston in 1883 there were only about eighty present. Taken altogether, the papers were above the average in character, and some of the discussions were animated and interesting. The local members were exceedingly hospitable, and entertained in a royal fashion.

The meeting for 1896 will be held in Montreal, and, as a matter of course, is bound to be successful. The physicians of that city know how to organize for a good meeting, and they also know well how to entertain. Dr. Thorburn, of Toronto, one of the oldest and for many years one of the most active members, was elected president for the next meeting; and his friends—who are many—think he well deserves the honor. It was expected by many that Toronto would be chosen as the place of meeting for next year; but in consideration of the fact that the meeting of the British Association for the Advancement of Science is likely to be held in that city in 1897, it was thought better by the majority of those present to hold the meeting of our association in Toronto at the same time. Pleasing recollections of the remarkable success of the Montreal meeting in 1884, under similar circumstances, largely influenced the members in reaching their decision. Among the distinguished guests from Great Britain on that occasion were: Mr. Lawson Tait, of Birmingham; Dr. Struthers, of Aberdeen; Dr. MacAlister (Editor of *The Practitioner*), Drs. George Harley, Heywood Smith, and P. Smith, of London; all of whom attended the meeting faithfully, and joined in the discussions on the various papers that were read.

There was much satisfaction felt in Kingston over the attendance of a goodly number of representatives of the maritime provinces. The genial, charming, grand old man, the President, Dr. Bayard, of St. John, readily captured the hearts of the physicians of central and western Canada. May there still be in store for him many years of usefulness and happiness is the sincere wish of all those who had the pleasure of meeting him. We hope to see him and his friends, Drs. Farrell, White, Muir, Warburton, and many others, especially, at the meetings of '96 and '97.

LODGE PRACTICE AND THE I.O.O.F.

WE have at hand the report of the Grand Secretary, Mr. J. B. King, of the Independent Order of Odd-Fellows, that contains some very important information for the medical profession. We have perused the tables of sickness and mortality with great interest, and know of no other order or jurisdiction of this order that publishes so complete tables as those we find in this report.

The total membership in Ontario is 21,685, of which 3,019 members were sick during the year 1894; *i.e.*, one out of every 7.17 of the total membership received sick benefits. Taken altogether, the sickness of the 3,019 extended over 14,558 $\frac{1}{2}$ weeks; or an average of 4 weeks, 5 days, and 13 hours each. The table further shows that if this sickness had been spread over the entire membership that each man would have been ill 4 days, 16 hours, 16 min., 14 sec. Another table shows the age of each member that was ill. Here we see that between the ages of 45 and 56 the average sickness is over one week per member, excepting 46, 47, 49, and 54, in which it is over 5 days.

These statistics are very valuable to the profession, but it also demonstrates another very important element in the question of lodge practice. In these tables is also included one that shows the total amount paid lodge physicians, and we see the amount of work that was necessary to earn this honorarium. It makes the matter more serious when we remember that in some lodges the medicine is supplied free by the physician.

The sum of \$6,333 was paid as surgeons' fees, and \$2,171.64 for nurses. We have continued these averages, and find that altogether the physician received an average of 25 cents per member (21,685 members; \$6,333 fees), with an average sickness of 4 $\frac{1}{2}$ days, or about 5 cents per day of sickness; or, if the entire fees had been paid for the 14,558 weeks' sickness, it would allow the munificent sum of 43 cents per week to the doctor.

These figures show clearly the injustice and absurdity of certain contracts for lodge practice. Just consider for one moment that if only one visit per week was made the fee was less than fifty cents; and, as any one well knows, these cases demand much more frequent visiting—say, four a week—and that for a little over ten cents a visit!

This is the first opportunity that we have had of putting the lodge practice case on a dollars-and-cents footing. While physicians will attend at these rates for the sake of the advertisement, all we can say is that it is a costly advertisement, accompanied by a very marked loss of professional dignity.

EXCESS OF ZEAL IN CROWN OFFICERS.

WITHIN the last few weeks we have had our attention very forcibly directed to the consideration of the thinness of the ice—so to speak—upon which the practising members of our profession continually walk.

A practitioner of high standing, both professionally and as a member of the community, Dr. F. C. Stevenson, of Bradford, had occasion, some time ago, to induce abortion in the case of a patient who was apparently

dying of inanition from prolonged vomiting. The operation was undertaken only after trial had been made of the other less heroic measures at the doctor's disposal, and after consultation with, and by advice of, a brother practitioner. There was no attempt at concealment of the character of the operation; the woman's husband was informed and gave his consent, and a neighbor was brought in as a nurse. Unfortunately, skilled advice had not been sought soon enough, and the patient succumbed shortly afterwards. In spite of the openness of the whole procedure in connection with the case, rumor was soon busy, and to so good purpose that ultimately the body of the woman was exhumed, a post-mortem examination made, and an inquest held.

The result of the investigation was what all, except some of the Crown officials, expected, viz., the complete vindication of Dr. Stevenson and his consultant, Dr. Foxton.

To the ordinary observer, the whole proceedings in this case may appear to be proper; indeed, we have heard it said more than once that an investigation was absolutely necessary to clear up the case and put Dr. Stevenson right before the public. There is another side of the question, however. It must be remembered that the affair is reported in the various newspapers, and that the physician involved sees his name heralded abroad as a suspected criminal abortionist. This in itself will certainly cause annoyance enough; but we must also remember that a greater or less outlay of money follows, since a lawyer is almost necessarily engaged to look after the unfortunate doctor's interests at the inquest. Such being the case, Dr. Stevenson is entitled to ask, "Why has my character been called in question? What ground had the Crown for suspecting that my patient came to her death unfairly?"

It will not do for the officials engaged to say, as they sometimes do, "You are not accused; this is merely an investigation, and can do no innocent man any harm." The affidavit, in virtue of which an inquest is held in such a case, specifically states that good grounds of suspicion exist, and the individual concerned (Dr. Stevenson in this case) is warned that he need not give sworn evidence unless he choose, as it may be used against him. Surely, then, every precaution ought to be taken by the Crown to inform itself fully and accurately, so that a hitherto respectable citizen may not find himself practically accused of criminal conduct unless the information be unimpeachable. Especially in the case of medical men does it seem to us that care should be observed, since the nature of his relations to the public is such that the malicious can readily enough find him in compromising situations.

We are sorry to say that in this case the investigation itself showed that Dr. Stevenson was being assailed without any good ground what-

ever, and merely to satisfy the spleen of a man who had, on a previous occasion, demonstrated to the satisfaction of the Crown itself that he was utterly unreliable, and worthy of punishment as a perjurer.

It is conceivable that under certain circumstances it may be a difficult matter for officials to decide as to the credibility of information supplied them, but we can conceive of no valid excuse for the acceptance of the unsupported statement of a professional rival (we apologize to Dr. Stevenson!) with a criminal record as sufficient ground for the pursuit of a man of Dr. Stevenson's standing and past history. So far as we can judge, those concerned simply swallowed the story of abortion brought to them, and had forgotten—if ever they knew—that all abortion is not criminal abortion. It appeared, too, from the inquest, that, although a detective was at work upon the case, the Crown had failed to grasp the fact that the informant had been dismissed from attendance upon the sick woman for incompetency, and had been succeeded by Dr. Stevenson.

When we speak of Crown officials we wish it understood that no reference to the coroner who held the inquest is intended. All who know him know that there is none more jealous of the good name of the profession, and that nothing better could have happened Dr. Stevenson than that the investigation should fall into his hands.

Correspondence.

RE ASYLUM DISTRICTS.

To the Editor of **THE CANADIAN PRACTITIONER** :

DEAR SIR,—From the frequent inquiries addressed to the superintendents of the several asylums by medical practitioners in the province who are interested in having patients admitted, it would appear that the recent changes made in the districts allotted to the respective asylums are not generally known by the profession.

Some delay and annoyance has resulted to medical men in consequence of the new arrangement of the districts, and I have no doubt it would benefit a large number of the profession if you would have inserted in your journal the redistribution of the counties and their allotment to the several asylums.

I enclose you a paper-cover copy of my report for 1894, on pages 16 and 17 of the introduction to which you will find a statement of the asylum districts, as sanctioned by Order in Council, and from which you are at liberty to transcribe, if you approve of giving the matter a place in **THE CANADIAN PRACTITIONER**.

Yours very truly,

R. CHRISTIE, Inspector.

ASYLUM DISTRICTS.

The following is the statement of asylum districts extracted from Mr. Christie's report, which he kindly sent to **THE PRACTITIONER** :

After carefully considering the varied interests involved, I have concluded that the allotment of the districts to be attached to each asylum should be as follows. And, with the view of more explicit reference for the future, I would recommend that they be numbered, commencing at the western section of the province, designating it No. 1, or London District, to embrace the counties of Essex, Kent, Elgin, Lambton, Middlesex, Oxford, Huron, Bruce, and Perth, these having a combined population of 540,839, for which there is provision in the district asylum for 1 patient to every 537 inhabitants.

No. 2, or Hamilton District, to embrace the counties of Halton, Wentworth, Welland, Lincoln, Haldimand, Norfolk, Brant, Wellington, Waterloo, Dufferin, and Grey, having an aggregate population of 454,043, for which there is accommodation in the district asylum for 1 patient to every 493 of the population.

No. 3, or Mimico District Asylum, to embrace the counties of Peel, Simcoe, Ontario, Victoria, Peterborough, and the Districts of Muskoka, Parry Sound, Nipissing, Algoma, Thunder Bay, and Rainy River, having an aggregate population of 318,728, for which there is accommodation in the district asylum for 1 patient to every 569 of the inhabitants.

No. 4, or Toronto District, to embrace the city of Toronto and county of York, having an aggregate population of 245,101, for which there is accommodation in the district institution for 1 patient to every 518 of the inhabitants.

No. 5, or Kingston Asylum District, to embrace the counties of Durham, Northumberland, Hastings, Lennox, Addington, Prince Edward, Frontenac, and Renfrew, having an aggregate population of 267,170, for which there is accommodation in the district institution for 1 patient to every 477 of the inhabitants.

No. 6, or Brockville Asylum District, to embrace the counties of Leeds, Grenville, Dundas, Stormont, Glengarry, Prescott, Russell, Carleton, and Lanark, having an aggregate population of 288,440, for which there is accommodation in the district asylum for 1 patient to every 487 of the inhabitants.

The territorial district allotted as No. 4, or Toronto, may appear, at first sight, to be comparatively small, but it must be borne in mind that in the higher pay wards there is provided accommodation for 230 patients, which leaves only 478 beds available for warrant cases. The higher pay wards are available for patients from all sections of the province, and are not limited to any territorial division from which they may be admitted.

Meetings of Medical Societies.

CANADIAN MEDICAL ASSOCIATION.

THE annual meeting of the Canadian Medical Association convened in Kingston, Ontario, August 28, 29, and 30. The President, Dr. Bayard, of St. John, N.B., occupied the chair. The meeting was held in Queen's University.

WEDNESDAY MORNING.

WHAT IS THE BEST TREATMENT FOR RETROVERSION OF THE UTERUS?

This was the title of a paper by A. Lapthorne Smith, of Montreal. The paper consisted of a statement of how to replace the uterus in cases uncomplicated by inflammatory adhesions, or accompanying tubal or ovarian disease by the knee-chest position. In the more intractable cases where the round ligaments (which were muscular) had become relaxed he recommended the Alexander operation, the technique of which he described. In those cases where inflammatory adhesions were found, he considered the operation of ventro-fixation the better way of dealing with the organ. The method of doing this he also described.

THE PRESIDENT'S ADDRESS.

The first item of the afternoon session was Dr. Bayard's address. He said that his years were so far spent that honors did not possess the same charm they did years ago, but he no less appreciated the great honor of being chosen to preside over the deliberations of the Canadian Medical Association, representing, as it did, four or five thousand practitioners of medicine, scattered over a country so many thousands of miles in extent. He did not expect the honor, and he did not deserve it, as circumstances had prevented his attending many of the recent meetings. Such meetings were great educators, both of the head and the heart. It was a great stimulus to its members. It was at such meetings that they could compare the scientific phenomena they had observed in their practices. The progress of medicine was, in a great part, due to such associations of medical men. The social meeting, too, was a most pleasing element in such gatherings, where the friendly handshake and many expressions of brotherly love were manifested. This spirit of unity was a sign of progress.

The President then spoke of the status of the profession, contending that it should stand second at least among the professions. Its noble work was not sufficiently appreciated. Its portals were guarded by stricter examinations than all others. They were trusted by all classes ; they went into the abodes of the sick, and, exercising their glorious art, succored those who were smitten with the breath of pestilence, when deprived of all other friends:

“ Hour after hour each busy day has found
The good physician on his lonely round.”

Its members performed more gratuitous work than all other professions in relieving suffering humanity. It had been asked, Was it right and just that the State and public should allow the medical profession to do their medical charity when it received such scant recognition at the hands of either? It might be safely claimed that the remuneration paid by the State to any of its medical officers would not equal that paid to a third-class lawyer. It was estimated that in London one out of every two persons received charitable medical relief. This great and laborious work was freely given, no plaudits being asked for except Heaven's “ Well done.” When hospitals were State-supported and endowed, and were sustained by pay patients, they should pay their physicians, like members of other professions were paid for services performed. The State had no claim upon them, and it was certain the tax-gatherer did not forget them.

In the next part of the address, he reviewed the work physicians were doing in the line of preventive medicine, and the great saving to life resulting from the introduction of sanitary measures. The way medical health officers were treated in the way of remuneration came under the aged doctor's lash. The authorities made provision for grants to railroads, schoolhouses, and for the improvement of breeds of cattle, but only doled out a pittance for preventive medicine. The provinces of the Dominion did not spend the one-half of one cent *per capita* for that purpose. How long was this incongruous state of affairs to exist?

The President then dealt at length with the question of over-education, a subject he had touched on in his address at the meeting in St. John last year, and for which he had been taken to task. He still contended that education was being pushed to the sacrifice of the many school children's health, particularly that of the girls, who were to be the future mothers in this country.

The question of liquor-drinking also came under review ; the various methods of regulating it being spoken of. As to prohibition, the doctor thought that it was an impracticable thing. It had been tried in Eden, and failed there. He believed in the establishment of asylums for the inebriate. In speaking of the immense value of the study of bacteriology as a means of diagnosis, he had only to refer to its application to diph-

theria. By this exact means it was estimated that only about half the cases that would have been formerly called diphtheria were genuine cases. As the appliances necessary to carry on such investigations were not within the reach of the ordinary practitioner, he recommended the employment of a pathological expert by the State, one of whose duties it should be to carry on this special work.

PHYSICAL TRAINING AND DEVELOPMENT AS A THERAPEUTIC MEASURE.

A paper with this title was presented by Dr. B. E. McKenzie, of Toronto. He stated that in view of the remarks of the President on the matter of over-education of girls his paper would appropriately follow; for many of the cases of deformity he had to deal with were of the female sex, and caused by improper training. The first thing recommended in these cases of commencing deformity was to show the patient before a mirror her exact condition, and how much it could be corrected by her own unaided efforts. Encouragement was to be given to assume and maintain the corrected attitude as often as possible. Another feature was the class training of this class of patients—a method much more satisfactory than dealing with the individual separately. The doctor had found that as a result of the inculcation of self-control, and re-education, the patient was benefited in many ways: the appetite improved, the circulation became equalized and more rapid, and the nervous system much strengthened. The doctor reported the history of cases.

Dr. Louis Sayre, of New York, who was very warmly received, said that he felt it an honor to be present at the meeting. No more important subject could be brought before them than the one Dr. McKenzie had spoken of. The profession generally should have a keener perception of its importance. He was glad that it was receiving the attention it was. Up till recently it had not been attended to at all as it should have been. The nation would go to ruin if attention were not paid to it. The health of the growing generation must be attended to. The poor children, he complained, were packed off to schoolrooms and placed in ill-formed seats, with no place for their little feet to rest and no support to the back. This was one of the factors in the production of spinal curvature. This deformity could be rectified without splints or supports of any sort, simply by training.

Dr. Reginald Sayre, of New York, referred to the astonishing results accomplished by persevering effort with these cases. By this developmental system the effect on the mental system was most marked. He commended Dr. McKenzie's lateral curvature stretcher. In some cases support was necessary where the muscles were not sufficient to maintain the body in the correct position, until by training the muscles were able to perform their function.

Dr. Roddick, of Montreal, concurred with the previous speakers as to the value of class culture. He had introduced an idea he had got in Egypt recently—where he had noted there were no cases of spinal curvature due to the custom of carrying water-bottles on the head—of asking the patients, as one of their exercises, to carry weights on the head for a certain time daily.

EVENING SESSION.

The address on surgery was delivered by Dr. I. H. Cameron, of Toronto, who took for his subject the recent advances in cranial surgery.

TUMOR OF THE MEDULLA OBLONGATA.*

Dr. J. E. Graham, of Toronto, related the history of a case of tumor of the medulla oblongata. The symptoms pointed to a tumor of the cerebellum. Charts were exhibited showing the position of the tumor. The bibliography of the subject was then gone into.

REMOVAL OF THE MEMBRANI TYMPANI AND OSSICLES.

By Dr. Buller, Montreal. He pointed out that this procedure was applicable to those obstinate cases of middle ear trouble not amenable to other forms of treatment. Histories of cases were given, showing how the hearing had improved, and, in cases where the discharge recurred, how much more easily and effectually its seat could be treated.

The committee appointed at the last meeting of the association to look into the question of interprovincial registration expressed their regret that, by the system which at present obtains, a graduate in one province is not free to exercise his functions in all the provinces of this large, but sparsely settled, Dominion; that this condition of things prevents the names of medical practitioners in this Dominion being placed on the British register, becoming thereby British practitioners, a boon which the Council of Medical Education of Great Britain has more than once signified its willingness to grant; with this end in view, that it is therefore most desirable that a uniform standard of medical education, and a uniform method of examination for the whole Dominion, be established. In order to effect this purpose, that the secretary be instructed to communicate with the various provincial councils before the next meeting, asking that each council discuss the position, and appoint one or more delegates to a Dominion committee, for the purpose of adjusting a suitable curriculum to carry out the suggestion herein contained, and that each committee be requested to forward their finding to each of the provincial councils and to the secretary of this association before the next annual meeting.

FIVE YEARS' EXPERIENCE WITH THE COLD BATH IN THE TREATMENT OF TYPHOID.

Dr. Wm. Osler read a paper with this title. He stated that he had not followed Brandt's method to the letter of giving the plunge bath to all cases. In markedly asthenic cases, in very mild cases, and in those with

*Will be published in *THE CANADIAN PRACTITIONER*.

serious complications, the bath was not used. These constituted 58 cases out of a total of 356. In the 298 bathed cases the death-rate was 6.3 per cent.; in the other cases 10.2 per cent. Of course it was not to be forgotten, in considering these statistics, that hospitals were given the worst cases. In the bathed cases no other treatment was employed except where there was cardiac weakness, when strychnia and alcohol were administered. The diet consisted of milk, or broths and egg albumen. The paper referred to the excellent general effect, as well as the antipyretic one, from the use of the baths.

A skin clinic was then given by Drs. J. E. Graham, of Toronto, L. Duncan Bulkley and A. R. Robinson, of New York. Of the patients presented, one had alopecia areata, two other psoriasis, and a third eczema seborrhoeicum. Dr. Graham discussed the diagnostic points in the cases; Dr. Robinson, the pathology; and Dr. Bulkley, the treatment.

The members of the association were then entertained by the Kingston physicians to a seven-hour cruise down the St. Lawrence among the Thousand Islands.

EVENING SESSION.

The evening session was held in the parlor of the Frontenac Hotel.

OPERATIVE TREATMENT OF INJURIES TO THE HEAD

was the title of a paper by Dr. A. J. McCosh, of New York. The essayist gave all the prominent features of the modern method of dealing with the cranial injuries, and reported the history of several interesting cases in which he had operated. Drs. James Bell, of Montreal; Geo. A. Peters, of Toronto; and W. W. White, of St. John, took part in the discussion.

The address in medicine was given by Dr. Edward Farrell, of Halifax, and dealt with the progress made in the different departments of medicine.

NEWER REMEDIES IN DISEASES OF THE SKIN.

Dr. L. Duncan Bulkley read a paper on this subject. The essayist said that he was rather slow in introducing the many newly vaunted remedies for the skin. He liked to stick to the old-time remedies. Among the newer remedies to which he referred was resorcin, ichthyol, theol, aluminol, beta-naphthol, europhea, aristol, cocaine, and others, pointing out the therapeutic use of each.

OBSTINATE DYSMENORRHEA.

Dr. J. Campbell reported a case in which dilatation of the os was tried, local applications and electricity, but without avail. Finally a laparotomy was resorted to, involving removal of both ovaries and tubes, with complete relief to the patient. The only pathological condition to account for the trouble was a cystic condition of the ovaries.

"Hydatids" was the title of a paper read by Dr. A. Bethune.

THE IMPORTANCE OF EARLY TREATMENT IN CUTANEOUS CANCER.

Dr. A. R. Robinson, of New York, presented a paper. The speaker's presentation of the subject was a study of the pathological conditions found in epitheliomata of the skin. Charts were exhibited showing the method in which the neoplasms extended. There was an abnormal proliferation of epithelium. This proliferation was associated with the production of poisons which were injurious to the tissues. Then there was a change in the connective tissue with epithelial invasion by the lymph glands. At the first this cancer was a purely local disease, and progressed slowly, usually by reason of the resistance of the tissues. In this stage it was perfectly curable. It was a matter of regret that general practitioners allowed these cases to run on and on till it was too late for removal to save the patient. Too often they were dallied with by careless applications of silver nitrate, which only tended to materially aggravate the disease.

CACHEXIA STRUMIPRIVA*

was the title of a paper by Dr. Wesley Mills, of Montreal. It was illustrated by the presentation of two cats with both thyroids removed, and a dog with one-half the thyroid removed some four days before. The dog had passed his worst symptoms, and was improving. The cats were rapidly dying. They were greatly emaciated, having no desire for food; consequently they were scarcely able to walk. Tonic spasms of the legs were to be noted. The dyspnoea was marked. The paper dealt with the effects of removal on the blood plasma, and upon the leucocytes and red cells. The various theories of the functions of the thyroid were reviewed in connection with blood elaboration.

THYROID FEEDING IN CASES OF STUPOR

was the title of a paper by Dr. C. K. Clarke, of Kingston. In a number of patients whose histories he gave the effect was very pronounced, a permanent cure resulting. In other cases it failed. He had given as high as 20 grains of the extract at a dose.

Dr. Louis Sayre, of New York, gave a clinic on hip disease, presenting two children, one in the second stage, the other showing the third stage. He outlined his treatment of the disease, when in the first and second stage, to be the fixation of the limb in the position of ease, with extension, keeping the patient quiet in bed during the process of straightening, which might occupy a few weeks; then he would apply any approved fixation splint and let the patient go out into the open air.

*Will be published in October issue.

ACUTE URÆMIA, FOLLOWED BY GANGRENOUS ABSCESSSES OF THE LUNG, was a paper read by Dr. McPhedran. The patient was a man aged 52, who gave a history of vesical irritation for two years preceding the uræmic attack, which was sudden and severe. A large quantity of albumen was found in the urine. Free diuresis, diaphoresis, and catharsis relieved the condition. Two weeks after a gangrenous odor of the breath was noted, accompanied by slight cough. The sputum was also offensive, and contained elastic fibres. It passed off in a few days, and improvement slowly followed. Evidences of disease showed itself in the anterior surface of upper lobe of the left lung. During the winter he had recurrent attacks of hæmoptysis. The lung gradually healed, and general improvement followed.

Dr. Reeve read a paper, explaining the different parts in the construction of the ophthalmometer, and speaking of its great value in discovering the presence of astigmatism.

SOME PROPOSED CHANGES IN THE CANADIAN MILITIA SERVICE.

Dr. W. Tobin, Halifax, presented a paper on this subject. It recommended that militia medical officers should receive such instruction in military surgery, ambulance drill, and the routine of military medical administration generally, as would enable them to discharge satisfactorily their duties in the field and in military hospitals. It also advised the formation of bearer companies in localities where regiments were brigaded together, to receive aid in stretcher drill and first aid to the wounded.

Surgeon-Colonel O'Dwyer, principal medical officer of the Imperial forces in Canada, gave his experience of the departmental and the regimental systems, and approved of the formation of bearer companies.

On motion of Dr. J. H. Mathieson, seconded by Dr. Bethune, it was resolved to forward these recommendations to the government.

Dr. Webster, of Kingston, gave the history of a case of cerebral tumor* in an insane woman, whose mental derangement was due to the presence of the neoplasm.

"A Case of Nephrectomy" was dealt with by Dr. Ahern, of Quebec.

"Some Indications for Electrolysis in Angeioma and Goitre,"† by Dr. C. R. Dickson, Toronto.

"Hernia of the Vermiform Appendix," by Dr. R. W. Garratt, of Kingston. After the usual votes of thanks, the association adjourned.

The members at the close of the session visited Rockwood Asylum and the Penitentiary, and were courteously received by the authorities of each.

The meeting next year will be held in Montreal.

*Will be published in THE CANADIAN PRACTITIONER.

†See page 644.

Book Reviews.

LESSONS ON PHYSICAL DIAGNOSIS. By Alfred L. Loomis, M.D. French revised edition. 8vo., 290 pages. New York : Wm. Wood & Co.

The tenth edition of this well-known and extremely useful text-book, while maintaining the many excellencies of former editions, is rendered more complete by the addition of a new chapter on chemical microscopy. In this article microscopic examinations of blood, urine, sputum, vomit, fæces are clearly described. Altogether, the book is to be recommended as an excellent guide in all forms of physical examination.

TRANSACTIONS OF THE COLLEGE OF PHYSICIANS. Philadelphia, 1894.

The College of Physicians of Philadelphia have collected and published in a neat volume of 300 pages the papers read during the year. There are exhaustive papers on "Acute Appendicitis," "Acute and Chronic Appendicitis," "Non-Albuminous Nephritis other than Typical Fibroid Kidney," "Hydrophobia in the United States." The book contains reports of many rare and interesting cases. There is a full report of discussion on registration of tuberculosis. The book is edited by G. G. Davis, M.D.

A SYNOPSIS OF THE PRACTICE OF MEDICINE. By William Blair Stewart. This volume of some hundred pages is certainly nothing more than the author claims for it.

However busy the practitioner may be, should he be deeply interested in his work, he will make more opportunities for reading than he finds. When, however, the opportunity does present he likes a readable book, which this cannot pretend to be. Fortunately, nowadays, students have ample time in a four or five years' course to read thoughtfully the excellent text-books suggested by the school calendars, and we believe that most intellectual students can review their favorite authors more rapidly and to better advantage than by resorting to an unfamiliar synopsis of many writers.

Whilst the work touches upon most of the cardinal points of treatment and diagnosis, it is so fragmentary as to the information it affords, and so monotonous in expression, that we doubt its usefulness to either the student or practitioner.

SURGICAL PATHOLOGY AND THERAPEUTICS. By John Collier Warren, M.D., Professor of Surgery in Harvard University, and Surgeon to the Massachusetts General Hospital. 832 pages. Illustrated. Subscription price, \$7.00. Philadelphia: W. B. Saunders, 925 Walnut street.

The subject of Surgical Pathology is one that has not been over-written; it has rather been neglected. In the present work we have a classical treatise on a most valuable subject. The author, than whom no more competent person could have undertaken the task, has combined the pathological with the therapeutical aspect of surgery. This is of great advantage to the student in his reading, enabling him to study the cause and effect simultaneously with the removal of the result. The practitioner can reap a bountiful harvest of knowledge from its pages, since the study of morbid results has so vastly changed during the past few years, and in this work the matters treated of are up to date. No work on pathology that does not include bacteriology can be complete. The work in review opens with a chapter on bacteriology, dealing with its history and development, and following through the general means adopted to detect and recognize the same. This is followed by a chapter on surgical bacteria, and fully presents the rôle they play in the production of unpleasant sequences after operations, and also of those that are found in cases of tetanus, anthrax, tuberculosis, syphilis, etc., etc. The three succeeding chapters are devoted to hyperæmia, simpler infective inflammation, an intimate knowledge of which every practising surgeon should be possessed of. Process of repair, shock, pyæmia, septicæmia, etc., etc., are all elaborately described. We feel sorry that space will not allow of a more extended notice. No surgeon is thoroughly equipped who has not the work in his library; we know of no work in any language that is equal to it. The publishers have spared no expense in having the illustrations well done—they are a great aid to the text. The typography is beautiful and clear.

The following books and pamphlets have been received :

NARCOTIC ADDICTION. By Stephen Lett, M.D., Medical Superintendent of the Homewood Retreat, Guelph, Ont. Reprinted from *The Canadian Medical Review*, Toronto, July, 1895.

EVISCEMENT OF THE EYEBALL. By L. Webster Fox, M.D., Philadelphia. Abstract of a paper read before the American Medical Association, Ophthalmic Section, held in Baltimore, May 7, 1895.

BURNS OF THE CORNEA ; ELECTRIC-LIGHT EXPLOSION CAUSING TEMPORARY BLINDNESS ; TRAUMATIC INJURIES TO EYES—HYPOPYON. By L. Webster Fox, M.D., Professor of Ophthalmology in the Medico-Chirurgical College, Philadelphia, Penna.

ADDRESS ON THE FOUNDING OF THE ILLINOIS HOSPITAL. By Seth Scott Bishop, M.D., Professor of Diseases of the Nose, Throat, and Ear, in the Chicago Summer School of Medicine ; Professor in the Post-Graduate Medical School and Hospital, Chicago. Reprinted from *The Journal of the American Medical Association*, June 29, 1895.

Medical Items.

DRS. WALTER B. GEIKIE and Fred LeM. Grasett, of Toronto, have recently returned from Europe.

THE meeting of the British Association for the Advancement of Science for the year 1897, will be held in Toronto.

THE Mississippi Valley Medical Association held its twenty-first annual meeting in Detroit, Michigan, September 3, 4, 5, and 6.

DR. K. C. MCILWRAITH, who spent a year in the Hamilton General Hospital after graduating in the University of Toronto, has commenced practice in Toronto.

DR. G. S. GLASSCO, after spending a year in Europe, where he was engaged in post-graduate work, has returned to Canada, and commenced practice in Hamilton.

DR. W. W. POTTER, of Buffalo, and Dr. L. S. McMurtry, of Louisville, Kentucky, paid a flying visit to Toronto, August 20, and were the guests of Dr. James F. W. Ross.

THE twenty-third annual meeting of the American Public Health Association will be held at Denver, Colorado, on Tuesday, Wednesday, Thursday, and Friday, October 1, 2, 3, and 4.

JOHN D. MCCONNELL, M.B.—The body of Dr. McConnell, who died in London, August 1, (as mentioned in our last issue), was brought to Toronto; and the funeral took place from his late residence on Dundas street to Thornhill, August 24.

THE fifth annual meeting of the American Electro-Therapeutic Association, was held in the building of the College of Physicians and Surgeons, Toronto, Tuesday and Wednesday, September 3 and 4. On the evening of September 4, a "reception" was given to the society by the profession of Toronto in the Athletic Club.

DR. W. OSLER, of Johns Hopkins Hospital, Baltimore, spent a few days in Toronto during the latter part of August. He had just completed the revision of his work on the "Practice of Medicine," and the second edition will soon be issued. The Appletons did remarkably well with the first edition, having sold in the neighborhood of twenty-five thousand copies.

SENATE ELECTIONS, UNIVERSITY OF TORONTO.—The following have been nominated as candidates, in the coming election for the Senate, to repre-

sent the graduates in medicine of the University of Toronto and the University of Victoria College : Drs. L. McFarlane, J. E. Graham, I. H. Cameron, W. H. B. Aikins, and A. H. Wright. The graduates in medicine are entitled to elect four representatives. Votes will be received by the Registrar, by post or otherwise, between Wednesday, September 11, and Wednesday, October 2.

THE MASSACRE OF MISSIONARIES IN CHINA.—It is melancholy to reflect that while Dr. Smyly, of Dublin, was participating in the business and pleasures of the annual meeting, his sister, Mrs. Stewart, and her children were the victims of the horrible massacre at Whasang. On that terrible 1st of August he was present at a large luncheon party at Sir William Priestley's house, and in the evening he went to the Ladies' reception at the New Gallery, unconscious of the awful fate which had befallen his sister that very day.—*Brit. Med. Journal*.

HOSPITAL SUNDAY AND THE MEDICAL PROFESSION.—While pleading the cause of London hospitals on Sunday in Westminster Abbey, the Rev. Canon Wilberforce did not omit to speak in words of high commendation of the fidelity and ability of the medical profession. Not only was allusion made to Sir Andrew Clark and others of our civil brethren, but a touching reference was also given to the noble services of an army medical officer, Surgeon Langdon, who, at the action on Majuba Hill, when seriously and afterwards fatally wounded, rendered aid to those requiring assistance. The medical profession owes a debt to Canon Wilberforce for bearing testimony to their thoughtfulness and self-denial under trying circumstances.—*British Medical Journal*.

TESTIMONIAL TO SIR JOSEPH LISTER.—Sir Joseph Lister will, on July 30th, be presented with his portrait, painted by Mr. J. H. Lorimer, A.R.S.A., at a meeting to be held at 4 p.m. on that day at King's College Hospital. The presentation will be made by Sir John E. Erichsen, President of University College. When Sir Joseph Lister retired from active hospital and teaching work last year, it was felt that the occasion ought not to be allowed to pass without showing in some tangible way the regard and esteem in which he is held by his former colleagues and pupils. The honorary secretary of the testimonial fund is Dr. J. Frederick W. Silk, 29 Weymouth street, Portland Place, W., to whom applications for admission to the ceremonial should be addressed.—*British Medical Journal*.

OBITUARY.

A. K. MERRITT, M.B.—This bright and clever young physician died suddenly at the village of Mount Pleasant (Scotland P. O.), in the county of Brant, September 12. He took by mistake an overdose of strychnine, and died from the effects in half an hour. He was educated in the University of Toronto, and received his degree of M.B. in June last. He was an excellent student, at his final examination was first on the list, and received as a consequence the Faculty gold medal. He was deservedly popular with lecturers and students, and his untimely end is very deeply deplored. Drs. McKay, Sheahan, and Chapman, three of his fellow-graduates, went from Toronto to attend his funeral, which took place in Scotland, September 14. Dr. Chapin, of Brantford, another graduate of 1895, was also present at the funeral.

DAVID EARL BURDETT, M.D., M.R.C.S.E.—Dr. Burdett died at his home in Belleville, after a long illness, August 25, at the age of 67. He was born in Prince Edward county, Ontario, and received his degree in medicine from Trinity College, Toronto, in 1855. After practising several years he went to England for post-graduate work, and became, by examination, M.R.C.S.E., and Lic. Mid. R.C.P. Edin. He had a large practice in Belleville, and was also well known outside of medical circles. He was for a time a member of the municipal council, coroner for the county of Hastings, and surgeon-major to the Argyle Light Infantry. In addition to his widow and one daughter, who survive him, there remains one son, Dr. Harry Earl Burdett, who graduated at Queen's in 1886, and is now practising in St. Paul, Minn., where he holds a prominent position in the leading university of that city.

WALTER ROBERT GILLESPIE, M.D.—We have to record with deep regret the death of a very worthy young physician, Dr. W. R. Gillespie, which occurred at Penetanguishene, August 23. He took his medical course in the Toronto School of Medicine, and graduated in Victoria University in 1887. For a time he practised in West Toronto Junction, and, while there, had an attack of scarlatina, followed by acute Bright's disease, which finally assumed the chronic form, and caused his death. Shortly after his attack of acute nephritis, which did not appear to be serious in character, he went to Penetanguishene and entered into a partnership with his brother, and was able to do a certain amount of practice until a few weeks before his death. The remains were brought to Cannington, the home of his boyhood, and buried, August 28.

DR. EDWARD RUSH PALMER, of Louisville, Ky., died on the night of July 5-6, 1895, from the effects of an injury received in a bicycle collision while riding on the Third street boulevard in the city of his home. The accident occurred late in the evening of July 5, by which he was hurled headlong against the curbstone. He almost immediately became unconscious from a fracture of the base of the skull, and was taken to the Norton Infirmary, where he died at 12.30 a.m., July 6. Edward Rush Palmer was born at Woodstock, Vt., November 18, 1842. He served in military hospitals in Louisville and Lebanon, and at the end of the war returned home, where he entered upon the general practice of medicine. About ten years ago he abandoned his large family practice to devote himself to the specialty of genito-urinary surgery, in which he became celebrated. In 1868, he was chosen professor of physiology in his *alma mater*, and held a chair in that institution until he died. In 1893 he was elected president of the American Association of Genito-Urinary Surgeons, and attended its last meeting at Niagara Falls, May 29-30, 1895. It is not often that we are called upon to record such a painful incident in these columns. Dr. Palmer was a man who took great enjoyment in life, and, though turned well into the fifties, he was as fresh and vivacious as a boy in his 'teens, while yet strong in his well-ripened manhood. He leaves a wife, daughter, and two sons to mourn his untimely end. We publish in this issue a late paper from Dr. Palmer's ready pen.

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EDITOR:

ADAM H. WRIGHT, B.A., M.D. Tor.

ASSOCIATE EDITORS:

JAMES F. W. ROSS, M.D. Tor.

JOHN CAVEN, B.A., M.D. Tor.

EDMUND E. KING, M.D. Tor.

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Original Communications.

EXPERIMENTAL CACHEXIA STRUMIPRIVA (THYROIDECA- TOMICA).*

BY WESLEY MILLS, M.A., M.D.,

Professor of Physiology in McGill University,
MONTREAL, QUE.

AS a result of new methods, new facts, and an altered point of view, the face of modern medicine is being so changed as to be scarcely recognizable. Within a few years we have passed through two phases of the microbic theories of disease: one in which the microbe was thought to be directly the cause of morbid conditions; the other, and later one, in which the direct effect of the microbe is subordinated to the results consequent on the action of such products as it may originate within the organism, usually denominated toxins. But concurrently with the reign of the microbe there developed clearer views of biological, physiological, and chemical processes both in health and in disease. The metabolism of cells as such,

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or as they compose tissues and organs, may not yet be as clearly grasped as could be desired ; but such new and unexpected light has been shed on the working of the body, its metabolism, by the removal of certain organs, in whole or in part, that changes have been, in consequence, made in theory and practice scarcely less remarkable than such as have grown out of the investigation of microbes in all the varied parts they play in disease. As a result, the understanding of the processes of life as a whole has been, or may be made, clearer ; in other words, there has been a remarkable advance in physiology. Several organs, the function of which was believed to be known, have been lifted into greater prominence by having new functions attributed to them, or at least it has become clear that we must no longer believe that their use in the economy is fully explained by the functions till lately assigned to them.

Our difficulties regarding ductless glands are at all events disappearing, if they have not been wholly removed ; and, as often happens, the indirect benefit is perhaps greater than the direct, for by these recent advances we are led to see how crude have been many of the explanations offered to the student of physiology up to the present time.

I have chosen the above subject on which to engage your attention for a short time because, in the first place and chiefly, I regard these changes of view of so much importance as likely to give rise to many practical results, sooner or later, of a character quite beyond our powers to define just now ; and, in the next place, because the thyroid gland is attracting deservedly so much attention at present in practical therapeutics ; and its study is likely to give rise to similar investigations of other organs whose function has been obscure, and, as hinted before, may lead to still greater widening of our views of the scope of action of organs to which we have long attributed only certain functions ; and, finally, because I have felt that I would be best entitled to claim your attention to what I had myself made the subject of some investigation, selecting it for the present occasion rather than some scientific subject whose practical bearings were less evident ; while I hoped that the practical demonstrations I might be able to give may be more impressive and illustrate more clearly the importance of this gland in the animal economy than any mere descriptions possibly can.

So many workers in different lands have now reported their results, and so many theories have been held as to the function of the thyroid gland, that the time would fail me to refer to them all, or to any of them, at great length.

From the notion that the thyroid gland had no function whatever, or that it was a mere mechanical diverticulum or reservoir for blood, down to the more definite and narrow view that it is concerned with producing and

imparting to the blood some substance essential for the tissues, there is a great gulf fixed surely.

An admirable résumé of the different views held from time to time, with a statement of the results of his own and others' experiments on animals, from the pen of Prof. Victor Horsley, will be found in the *British Medical Journal*, 1894 ; indeed, I have but few new facts to contribute, though I shall present the subject very much as it has impressed me as a result of my own experiments and reflections.

We are beginning to recognize that a physiology for any organ is not universal, *i.e.*, we cannot after investigations on one group of animals apply the conclusions, legitimate in such a case, to another until that other has been investigated. I note this change with the more pleasure, as I believe I was one of the first to insist on this sort of caution.

Now, nothing is clearer from comparative experiments than that removal of the gland leads to very different results in different species of animals. Some, as birds and rodents, show no symptoms, while others, as the carnivora, soon manifest a group of grave symptoms that usually speedily end in death ; while between these there are species of animals which do not manifest for months the cachexia that may finally prove fatal.

The conclusion has been drawn that the gland is of very varying importance in these different groups of animals. While this may be true, I do not see that it must necessarily follow, for it may be that its function is quite as important normally, but that the power of compensation by other organs may be greater, as it certainly is in certain individuals, for all of the same group may not show the cachexia equally soon or succumb so speedily ; nevertheless, it is likely that the gland is of very much more importance in the dog or the cat, for example, than in the ox or the horse.

One point is beyond doubt, *viz.*, that the gland is of vastly more importance to the immature animal than to the adult, while the old seem but little dependent on it. The organ is believed to be functionally active before birth even in man, and it atrophies in the old. Certainly the results of removal in the young and in the old are very different. A young dog will die soon after the operation, while an old one may long survive.

"Foetal rickets" is probably the cachexia strumipriva.

I have had no experience with monkeys; but so far as I have observed other animals, the symptoms and the order of their development may be classified, as Prof. Horsley has done, into those of, first, increase, and, second, diminution, or want of function—a classification based on that of Hughlings Jackson as applied to diseases of the nervous system.

The most prominent symptoms are referable to the nervous system. In the carnivora this is always well seen when the cachexia follows at all. First of all, at a variable time after operation, in animals not old, usually

in a few days one notices the symptoms of overaction, *i.e.*, tremors which may grow into more or less tetanoid spasms, reminding the physician of a case of tetany.

These are followed by, and, to some extent, replaced by, diminished voluntary motor power or paralysis.

Very early in the history of the case the animal walks stiffly, and later he may, from pure paralysis, as well as general weakness owing to lowered vitality, walk very feebly, or not at all.

Generally progressive and rapid emaciation is well marked in the carnivora; though after complete extirpation in man this is not always pronounced. In my experience, it is always marked in the carnivora, no matter how well they may be fed before or after the operation, though, of course, an animal in good condition will last longer than one already thin, or out of condition in any respect. It reminds me of the rapid loss of flesh often seen in dogs with distemper. Another symptom that impresses one greatly in most cases is the dyspnoea. To look at a dog in the later stages of the cachexia, witness the emaciation, the dyspnoea, the tremors or spasms, the weakness, paralysis, and stupor (cretinism), is to behold a picture never to be forgotten; and all this caused by the removal of a gland weighing, in even a large dog, only a few grammes—so delicately adjusted is the vital mechanism in any mammal. Some stress must be laid on the dullness. A cat that would show every sign of excitement at the sight of a dog is, in an advanced condition of the cachexia, indifferent even when placed in the same cage with this animal.

And while the carnivora from showing the symptoms of the cachexia strumipriva in the most pronounced form are the best suited for demonstration, the same set of symptoms, in greater or less degree, seems to appear in all animals affected, though in the case of man some of them are so indifferently marked that they may escape observation.

It is interesting to note, in this connection, that Dr. James Stewart, of Montreal, has reported a case of myxoedema, preceded by tetany, in which there was complete absence of the thyroid gland.

The change in temperature, decided elevation in the stage of overaction and fall in the stage of depression, witnesses to the great derangement of the vital processes.

A myxoedematous condition occurs in animals from which the thyroid gland has been removed, but this has not been present in any appreciable degree in those on which I have operated, owing probably to the rapid progress towards a fatal issue.

In one of the dogs from which I removed the gland, there were no symptoms after several weeks. I then used the animal for another experiment, and two weeks later it was destroyed.

It is usual to explain these exceptions to the ordinary course of events in one of two ways : (1) Delay in the appearance of the cachexia, which would ultimately develop if the animal were allowed to live long enough. (2) The presence of supplementary thyroids to be found in the neck (thyroid region), or in proximity to the arch of the aorta. However, I do not see that, if in some cases the cachexia never appeared in a form appreciable by us, it would wholly invalidate the theory, or that the result would be entirely without parallel.

The removal of the testes is followed by different effects, not only in different classes of animals, but in the same species ; *e.g.*, it is absolutely impossible to predict what the physical, or even psychical, effects of castration will be in the dog, beyond perhaps the annihilation of sexual power. In some cases, for example, the animal becomes grossly fat, loses all spirit, and leads a sort of vegetative existence ; while in others he appears to be but little changed in any way—at least to ordinary observation.

But we must now inquire into the cause of these remarkable results. It is known that some product or products elaborated by the secretive power of the gland passes from its acini into the lymphatics, and thence to the blood. The so-called colloid material is really of an albuminous nature.

The old view that the gland is hæmopoietic is not wholly erroneous, though that it has any direct function in the formation of blood cells is not supported by good evidence ; but that it does influence this process indirectly is beyond doubt, unless we attribute the decided diminution of red cells to a destruction of the cells already formed rather than to an inhibitive influence over the processes of their formation, for one of the most marked effects of thyroidectomy is the diminution in the number of the red corpuscles, accompanied by an increase in the leucocytes, afterwards followed by a fall to normal or below it.

Turning from this aspect of the subject, for the present, to the nervous symptoms and the dyspnœa, how are we to explain derangements so pronounced and so rapid as these generally are in the carnivora at least ?

The tendency now seems to be to abandon the earlier theory that the cachexia was produced by failure to abstract some injurious product from the blood when the gland is diseased, or has been removed by operation. Attention is now rather called to the probability that those products which the gland supplies to the blood are essential to its complete constitution, and without which defect in the metabolism must result.

It is being slowly realized that the corpuscles do not constitute the blood, and that the blood is not, as by far the larger proportion of students are apt to think, a mass of cells floating in a fluid which exists principally

to convey these corpuscles hither and thither ; but rather that the blood is a fluid of infinite complexity, and of whose composition, except as regards a few of the coarser details, we know but little, except in the vaguest way.

The dyspnœa that is one of the most striking evidences of the cachexia is evidenced by some as proof that the gland plays a special part in connection with the oxidation of the blood and the tissues, though exactly how has not been made clear.

Horsley and others would explain the dyspnœa in great part through the effect of the disordered blood on the respiratory centre, and suggests that the cardiac symptoms, etc., point to a special derangement of bulbar centres. In some of my cases, the dogs passed from violent dyspnœa to calm breathing, suddenly, and, after remaining quiet for many hours, again became dyspnœic as before. This could scarcely be owing to any temporary improvement in the blood, but might be explained by exhaustion and diminished excitability of the respiratory centre perhaps. At all events, the venous condition of the blood does not seem to furnish a complete explanation of the dyspnœa, and the sensitiveness of the respiratory centre is known to us all.

It would appear that the cells that are directly concerned with movements, whether in the cortex of the brain, in lower encephalic centres, or in the spinal cord, are all affected. Direct experiment has proved that in the first instance there is heightening of the cortical excitability to electrical stimulation, and, later, the reverse ; but that the tremors and spasms are not dependent solely on the cortex was well shown in a case of my own. A young dog from which I had removed both cortical motor areas some weeks before developed the nervous symptoms of the cachexia in the usual way, and died on the sixth day. To my mind, the development of the nervous symptoms, and the light thrown on them by experiments both of stimulation and ablation, should enlarge our views of the mechanism of movements.

If it be true that a meat diet, and especially meat extracts, hasten death after the removal of the gland in the carnivora, then it would seem that possibly the thyroid gland may have an effect on the elaboration of products from the food which enter the blood, and so affect the metabolism in that way. In my cases meat has been withheld after the operations, so that there would be no fallacy from this source.

In order to understand the complexity of the workings of an organism like that of a mammal, one must study life in simpler forms, even in unicellular plants and animals, and then consider how involved the whole must become when there are a large number of colonies of cells of related form and function constituting tissues and organs, and that all these

structures are bathed in a lymph derived from and destined to return to the blood.

Since every cell not only takes from, but of necessity must give up to, the lymph, and so to the blood, some products which modify its composition, it follows that the blood expresses or represents in a way the results of the metabolism or cell-work of the entire organism, and possesses a complexity of composition beyond our power to fully conceive. Such a fluid it is impossible to analyze by any chemistry known to us at present. Such a fluid is never for a moment of identically the same qualitative and quantitative composition. I find no conception more helpful to myself in understanding life than that of ceaseless and infinitely rapid change.

We must remember, too, that the actions and reactions of cell upon cell, and organ on organ, are innumerable and never ceasing. It follows, therefore, that not a single cell, much less a single organ, can be removed or modified in its action without affecting the whole organism, and chiefly through the blood and lymph in the first instance, afterwards in no small degree through the nervous system in most cases.

And overlooking or insufficiently remembering these considerations has led to the adoption of very narrow views as satisfactory. It is the purpose of science to supply accurate information, but it should be equally the aim of science to avoid accepting views that must, in the nature of the case, be inadequate. Sufficient caution has not generally been exercised, or perhaps I should rather say that the conception of the complexity that actually exists is too often forgotten ; hence we do accept explanations that must, in the nature of the case, cover only a small portion of the facts.

Accordingly, I am myself unable to comprehend how we can understand the effects of removal of an organ by simply bearing in mind the part it plays of itself, so to speak, without also remembering what influence it may have as part of a complex whole. In a complicated mechanism, some wheel may of itself have little use, but by its removal the general balance is destroyed ; so in the animal body, by the removal of one part, countless other parts are thrown out of adjustment. Hence, to say that the thyroid gland, when extirpated, fails to remove from or to impart to the blood certain compounds may be true—no doubt is true—though we may be, and probably are, inadequately informed as to what is taken from and added to the blood ; but it is only a small part of the truth, for how can we possibly estimate how far-reaching such disturbance may be, apart altogether from the direct effect of the gland itself in the way usually indicated ?

I have been much interested in a report by Grigorieu (*Zeitschr. f. Heilk.* 1894, Bd. xv.) on the changes produced in the spinal cord of man after the removal of the extremities (amputations). But shall we conclude that the changes are confined to the spinal cord ? Nor must we, in any

case, ignore changes which may not be obvious. No doubt, many functional variations may be too slight for appreciation by us, either subjectively or objectively, at the time, yet they may lead to others of an obviously serious kind.

The fact that removal of part of the thyroid gland leads to hypertrophy of the remaining portion is of itself proof that the gland is of much functional importance, and at the same time illustrates, as do all such cases, that action and reaction, complex beyond all conception, which is ever going on, and to which I have been alluding. No cell is so small, so distant from others, but that in some way it makes itself felt, and this is to me the most important lesson of all of this recent development in physiology and medicine, growing out of the study of the total or partial extirpation of organs, of transplantation, of feeding of glands, etc.

But the subject is only opening up. It has been suggested that the pituitary body has a function allied to that of the thyroid gland, judging from its similarity of structure; but, according to the teaching of recent experiments by Prof. Schäfer, this is not the case.

If principles that seem to me to follow from the general laws of biology are well founded, then all organs probably impart to and remove from the blood certain special substances, and the recent additional knowledge of the thyroid, the pancreas, the pituitary body, the suprarenals, etc., are special cases under a very wide general law.

I venture to suggest that the testicles, for example, have a function of no small importance in the economy altogether apart from reproduction. The evidence for this is derived from the effects of removal, as well as from subjective experience and from observation, for, although not followed by such a cachexia as proves rapidly fatal, castration is, in many cases, in certain groups of animals, the sole cause of a series of degenerations, physical and psychical, not less pronounced than that which occurs after thyroidectomy in some animals. I conclude, therefore, that these organs are, if not essential, of no small importance in maintaining a well-balanced and vigorous metabolism. If the thyroid elaborates from and returns to the blood bodies that are tonic or stimulant to the organism, so in all probability do the testicles. But I wish to again point out that these are only marked examples—special illustrations of the old fable of the belly and the members.

With the advance of science our knowledge of exactly what the chemical products, etc., are will increase; but the time can never come when the whole matter will be completely understood—there will always remain some relations to be discovered and some mental connections to be made. A science of physiology exact and complete is to be aimed at, but cannot be realized. *In the meantime, the physician will think the better and estab*

lish his therapeutics on a more rational basis, I firmly believe, by a good grasp of the general relations of each part of the organism to the other, aiming ever at greater and greater definiteness in his conceptions. We see as through a mist, but we may hope to get more and more light through the mist.

ADDENDUM.

It may be instructive to give, in the briefest manner, an account of the development and course of the symptoms in those animals operated on specially for this meeting.

1. *Dogs.* (1) Puppy, five weeks old. Thyroidectomy on August 23 at 4 p.m. August 24: Does not eat well. At 10 p.m. violent dyspnoea, delirium; limbs, especially hind limbs, spastic. This condition continued, with intermissions lasting some hours, till death on fifth day. This case illustrates the rapidity of the onset, severity, and progress of the cachexia to a fatal issue in a very young specimen.

(2) Small bitch of about 20 lbs. Thyroidectomy, August 24. August 26: Looks fairly bright, but snuffles and shivers; twitchings, especially in the muscles of the shoulders. Begins to emaciate. Temperature somewhat elevated. Gradual progress in the cachexia, resulting in death on the way to Kingston, August 27, probably in convulsions. Lived less than four days. This bitch looked as though she might have been nursing puppies recently, which might hasten the issue.

(3) Small dog of about 18 lbs., in good condition. One-half the gland removed on August 22. August 23, a little dull. August 24, same symptoms as in the preceding case, including slight rise of temperature.

These symptoms did not progress in severity, but, on the contrary, disappeared gradually, and the dog throughout got brighter, fed better, and became more natural generally.

This case illustrates the fact that a part of the gland will suffice for the needs of the economy.

2. *Cats.* Two cats were operated on at the same time, August 26. August 27: One eating badly; shows muscular tremors. One of the cats very dull and will not eat. Both are dyspnoeic, especially the duller one. August 28: This cat has violent muscular twitchings, is very dull, and declines food. August 29: Both cry and move about in a way suggestive of delirium, especially the smaller cat, that up to now has been least affected. When the limbs are raised, there are irregular violent movements, showing inability to co-ordinate.

August 30: The one first affected has a convulsion. This cat continues to get worse, becomes comatose, and dies on September 1.

The other lives till September 3.

The glands removed, preserved in glycerine with a little water added, were exhibited.

The operation on dogs, cats, rabbits, etc., is of the simplest character. I have used antiseptic precautions, and found that the wound healed rapidly in all cases. No meat was given after operation, as it is thought to hasten the fatal issue.

My thanks are due to Dr. W. S. Morrow, Lecturer in Physiology, of McGill University, for kind assistance with the anæsthesia, etc., in these and other cases of thyroidectomy.

THYROID FEEDING IN STUPOR.*

BY C. K. CLARKE, M.D.,

Medical Superintendent, Rockwood Hospital,
KINGSTON, ONT.

SINCE recent unfair and uncalled-for criticism of asylum methods, medical men in hospitals for the insane have long been looked at askance, although undeserving of such wholesale condemnation. Even journals in Ontario have joined in the persecution without an effort to find out what is being done in our institutions, and, as I feel that we are at least entitled to fair play, I would beg of you all to enquire before you condemn. It is quite true that the asylum physician is too far apart from the general practitioner, and I hope the day is not far distant when we can have the benefit of consultation with general practitioners on certain cases that present difficulties to the specialist. These might have a flood of light thrown on them by the physician accustomed to look on things from a standpoint quite different from that selected by the alienist. There are those who think that in another class of cases in which the general practitioner finds difficulties the alienist might be helpful, but of that it is not my purpose to speak.

Without giving our critics credit for a discovery that most of us in hospitals made long ago, I may say that one of the dangers in an institution is that of falling into ruts and adopting methods of classification quite unjustified by some of the results that take place. We are apt to treat those under our care as a whole rather than individuals, and fall into the error of calling a case chronic when there is really a hope of benefit, if not cure. Of course, there is likely to be a good deal of difference of opinion as to what constitutes a recovery from mental disease, and those who pose for the applause of an indiscriminating public can show averages of recoveries that are not understood by the uninitiated; but this does not concern us here. In the course of long hospital experience, I have frequently been struck by the fact that some unexpected occurrence has resulted in the cure of patients who had been relegated to the list of chronics, and for whom we absolutely had no hope. As a matter of fact,

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the conditions were not understood. I have been particularly struck by the fact that in certain forms of stupor and melancholia the circulatory system has suffered to a marked extent, but it has not been possible to determine whether this was owing to positive physical disease or the presence of toxins. I have been equally impressed by the fact that certain occurrences, causing a distinct alteration in the circulation, resulted in striking mental changes not looked for and theoretically illogical.

From our limited point of view, it is difficult to see through this ; from your broader field of general practice, you may be able to look at the problem with greater clearness.

Let me illustrate the point I wish to emphasize.

Under certain conditions, the water supply at Rockwood Hospital for the Insane became contaminated by sewage, and typhoid appeared regularly. Although these outbreaks were an unpleasant experience, still they furnished valuable material for the clinical study of the effect of acute disease on mental trouble. We soon learned to look with interest for developments, and although, theoretically, one would be led to believe that the occurrence of an exhausting disease like typhoid would act most unfavorably on the mental condition, such has not been the experience ; in fact, it has just been the reverse, and recovery after recovery has taken place in a way that must justify one in the belief that the occurrence of acute disease was a benefit rather than otherwise. The happy result was particularly striking in many cases regarded as chronic. In others, improvement of evanescent type took place, and so great was the change that, for a time, it looked as if recovery were about to occur. The fact that we had so many cases of typhoid made it a simple matter to arrive at crystallized opinions on this subject ; but it is by no means a new discovery that acute diseases, in some instances, modify mental symptoms, or that striking results are obtained in cases of stupor by some sudden shock or injury.

These cases of stupor are always of great interest, and most difficult to manage. Many of them make excellent recoveries ; others improve for a time, then stand still, and finally slip back into hopeless dementia. We feel that, theoretically, they should recover, and yet there is something we cannot find necessary to give the start toward mental restoration.

It was with peculiar interest we read the first vague experiments with thyroid extract in cases of mental disease ; and, when our studies were under way, the results obtained by Drs. McPhail and Bruce made us follow up the subject with deepened interest. Having in mind the classes of patients most benefited by typhoid, we selected, for early experiments, well-marked cases of stupor where the outlook had become unfavorable, if not hopeless. The cases cited here are merely a few among many

experimented upon, but are characteristic. A decided reaction was sought for, and the dose of thyroid regulated by the tolerance of each patient. As this paper is written merely with the hope of exciting discussion on a subject of intense interest, I cannot do more than deal in general statements in the time at disposal, but perhaps enough will have been said to engage the attention of those specially qualified in physiology and pathology to make some satisfactory explanation of the rationale of the action of thyroid extract, or of acute disease, in cases of stupor. It is certain that thyroid extract is a therapeutic resource of value in such cases, although more extended clinical research will enable us to select the patients most likely to be benefited by the treatment, and it would be a great help if the use of the extract could be made less empirical than at present. Cell nutrition is undoubtedly affected in a striking manner; increased metabolism occurs as the result of quickened circulation, and the autotoxic process so frequently present in cases of mental disease is interfered with in a way that may be beneficial. In other words, some patients are given a new start.

J.S., male, æt. 20, single. Of active, temperate habits. Twice insane before present attack. Hereditary; exciting cause la grippe. Insane two weeks before admitted. In certificates it is stated, "He is dull, impassive, tendency to look vacantly, and shows no sign of intelligence. He hesitates, and does not wish to answer questions. General appearance melancholy. His whole conduct is quiet; takes no interest in anything; chews chips (going to swallow these); put his hands on the hot stove. Every appearance and action of dementia. He held a book in his hand for half an hour without moving," etc.

Admitted January 12, 1893. Was in a state of complete stupor, without intelligence; dirty in habits, and required as much attention as an infant.

In January, 1894, the patient unchanged; getting thinner in spite of every attention in the way of extra diet and tonics.

January, 1895. Unchanged mentally, although much improved in physical health. Sits in one place all day; has to be led out to meals, and is in a condition of complete stupor.

January 8, 1895. During his previous residence in this hospital, when his mental condition was the same as at present, he recovered during an attack of typhoid. It is thought that, under the circumstances, thyroid feeding might give interesting results.

January 8. Treatment commenced with $3\frac{1}{2}$ grains of raw thyroids. Before giving, temperature, 97° ; pulse, 78; respiration, 13. Difficult to get specimen of urine for analysis.

January 10. Thyroids omitted on account of slowing of pulse, 51.

January 12. Five grains of desiccated thyroids noon and night.

January 13. Five grains three times a day ; perspiring freely ; habits more cleanly ; puffiness below the eyes ; much brighter mentally, and will laugh and talk.

January 14. Slight epiphora and oedema. Urine obtained and analyzed. Color, light amber ; reaction, acid ; specific gravity 1016. No albumen, no sugar. Dose of thyroids increased to ten grains three times a day.

January 16. Perspiring freely ; muscular twitching in hands. Brighter than at any time since admission ; laughs and talks freely.

January 18. Dose increased to fifteen grains three times a day. No perspiration.

January 19. Skin dry, and only a little moisture in axilla. Obeys instructions with alacrity. Dose increased to twenty grains three times a day. No change.

January 22. Perspiring. Has herpes labialis. Twitching of muscles of thumb.

January 23. Same doses, viz., twenty grains three times a day. Reaction marked. No further mental change.

January 24. Nasal mucous membrane much congested. Twitching of muscles of hand and left side of upper lip. Is very bright mentally.

January 30. Talks a great deal ; answers all questions. Pulse rapid, irregular, and weak. Hands tremble ; muscles of face twitching.

January 31. Thyroids discontinued. Complexion much clearer ; scales on face. Complains of thirst, and of feeling sick. Talks a great deal. Has lost flesh, and is weak. Fibrillar twitchings of upper extremity and face. Arterial tension diminished. Complains of headache and gastric distress. Urinary analysis : Color, light amber ; specific gravity 1022 ; acid ; a trace of albumen ; no sugar.

February 1. Quite well mentally, as far as can be ascertained. Still complaining of nausea and thirst.

February 2. Desquamating freely. Quite well mentally. Albumen disappeared from urine.

February 3. Feeling better physically ; very hungry ; put on Easton's syrup.

February 4. Improved. Is bright and happy, and cannot get enough to eat.

February 5. Putting on flesh rapidly.

February 6. Not quite so bright mentally.

February 7. Has suddenly relapsed to condition of complete stupor. Has returned to old dirty habits.

March 1. No improvement ; is worse physically, and no better mentally, for treatment.

The result in this case was disappointing, although we felt satisfied the relapse was likely to occur. The sudden way in which this happened was remarkable, but I have seen the same thing take place several times after typhoid.

H.S., æt. 35, married. Habits of life good. Exciting cause, financial troubles. Became insane in January, 1894. Was admitted to Rockwood Hospital in February of the same year.

The information given in certificates was not very satisfactory, but it was said that the patient "mutters and crouches; tears his bedding; throws the contents of his pail around the walls of his cells, and is occasionally uncontrollable; is the subject of various delusions; is incoherent in conversation, wild and dangerous." Wife states that on January 23, 1894, he came home yelling and saying that he had gone crazy; that something was wrong with his head. He then made several attempts at suicide.

When admitted to Rockwood he was in a condition of stupor, and in wretched physical health; circulation sluggish.

March 19. Sleeps well; takes his food fairly well; never speaks; sits in one place in a stupid state all day long; takes no interest in his surroundings; cleanly in habits, but careless as to appearance. Has been placed on extra diet; given tonics, etc.

May, 1894. Unimproved in spite of treatment; very destructive to clothing; does not talk; untidy; sits in one spot all day; cannot be induced to work; has gained a little in weight, but physical health still very poor; very constipated.

July, 1894. Dirty in habits day and night; destructive to clothing; quiet, and never violent; never speaks; improving in physical health.

August, 1894. Condition unchanged.

January, 1895. In much better bodily health; not changed mentally; dirty in habits. Case not improving, but may be benefited by thyroid treatment.

January 14. Treatment commenced. Before first dose was given, temperature, $97\frac{3}{5}^{\circ}$; pulse, 79; respiration, 19. Urine examined prior to commencement of treatment; amber-colored; specific gravity, 1026; froth somewhat persistent; acid; phosphates present; no albumen, no sugar; slight trace of Indican. Five grains of thyroids given at noon and night.

January 15. Morning, temperature, 99.1° ; respiration, 20; pulse, 82. Evening, temperature, 98.3° ; respiration, 23; pulse, 75. Five grains thyroids given three times a day. Perspiring freely.

January 16. Same doses; perspiring freely. Morning, temperature, 99.3° ; pulse, 82; respiration, 19. Evening, temperature, 99.2° ; pulse,

81 ; respiration, 22. Still dirty in habits. Only one dose of thyroids given. Temperature, 98°; pulse, 87 ; respiration, 19.

January 18. Dirty in habits. Dose of thyroids increased to ten grains three times a day, as no mental change has taken place. Morning, temperature, 99.3°; pulse, 95 ; respiration, 24. Evening, temperature, 99.2°; pulse, 90 ; respiration, 16.

January 19. Much brighter mentally, and talks ; says he feels a great deal better. Perspiring freely. Temperature, 98.1°; pulse, 92 ; respiration, 24.

January 21. Supply of thyroids exhausted. Not any marked change in pulse, temperature, or respiration.

January 22. Dose of thyroids increased to fifteen grains three times a day.

January 23. Decided reaction denoted by pulse and temperature. Morning, temperature, 100°; pulse, 97 ; respiration, 20. Evening, temperature, 99.4°; pulse, 113 ; respiration, 28. Answers questions quite readily ; is very nervous at all times, and his judgment is far astray.

January 24. Epistaxis ; perspiring freely. Morning, temperature, 99°; pulse, 93 ; respiration, 23. Evening, temperature, 99.3°; pulse, 103 ; respiration, 28. No change mentally.

January 25. More talkative than ever before. Pulse, temperature, etc., about same.

January 26. Dose increased to twenty grains three times a day.

January 29. Since the dose was increased little change in pulse, temperature, or respiration. Average about : Temperature, 99°; pulse, 90 ; respiration, 25. Is steadily improving mentally ; answers all questions promptly ; says he feels better than ever. Face often becomes flushed ; tongue coated ; costiveness marked.

January 31. Saliva running from side of mouth, causing seborrhœa. Says he feels sick at stomach ; vomited after dinner ; complains of headache.

February 1. Thyroid discontinued to-day ; sick at stomach ; slight desquamation on forehead and arms.

February 2. Desquamation and nausea.

February 3. Headache ; nausea ; urine, acid ; specific gravity, 1034 ; no sugar, no albumen ; has lost much flesh ; is much better mentally, although not well. Has been put on Easton's syrup.

February 10. Sitting up, but very weak ; eats well, and is cheerful ; steadily improving mentally.

February 20. Still improving, and gaining in every way.

March 1. Getting fat, eats and sleeps well ; is quite happy, and wonderfully better mentally.

March 15. Continues to improve ; working steadily ; quite recovered mentally.

March 26. Discharged recovered.

J.M., female, single ; æt. 21 ; native of Scotland. Hereditary tendency marked ; exciting cause not stated. Was admitted in November, 1894, and at that time had been insane two months or more.

The history and medical certificates contained meagre details of the patient's condition. She was said to refuse food and medicine ; to destroy clothing ; to expose her person on every opportunity ; to be filthy in her habits, etc.

When admitted was found to be in poor physical health, pupils dilated, and face a good deal congested, although this appearance was probably intensified by a large amount of acne. She had a staring look ; refused to converse, and was in a half-dazed and stupid condition. Was placed upon tonic treatment, and every possible effort made to build her up, without avail. At times she was excited and erratic, and inclined to be violent, although it was impossible to get her to converse. At all times the element of stupor was prominent. The skin had a greasy appearance ; and the patient ceased to menstruate immediately after her admission. About the middle of January the case began to appear hopeless, as there was not the slightest response to the different methods of treatment employed, and the patient seemed to be degenerating. The weight was about 120 pounds ; pulse, 85 ; temperature, $96\frac{4}{5}^{\circ}$; respiration, 16, when thyroid treatment was commenced.

January 26. Ten grains thyroids given three times a day. No effect.

January 27. Dose increased to fifteen grains three times a day. Evening, temperature, $98\frac{2}{5}^{\circ}$; pulse, 80 ; respiration, 19, and pulse irregular.

January 28. Same dose of thyroids. Temperature, 98.4° ; pulse, 96, irregular ; respiration, 17. Face flushed, and patient quite talkative.

January 30. Thyroids increased to twenty grains three times a day. Temperature, 100° ; pulse, 120, intermittent. Mental condition much the same as previous day.

January 31. Temperature, 100° ; pulse, 108. Eyes watery. Respiration, 19 ; pulse, intermittent. Patient brighter mentally.

February 1. Temperature, 100° ; pulse, 107. Decidedly better mentally. Same dose of thyroids.

February 2. Much the same.

February 3. Temperature, 98.4° ; pulse, 100 ; respiration, 18. Talks quite rationally ; is interested in her surroundings. The reaction from thyroids very marked ; evidently on the way to recovery.

February 4. Thyroids discontinued, as patient began vomiting.

Temperature ran up to 100°, and pulse 120. The pulse was most irregular, and of wretched character.

February 5. Temperature remains 100°, but pulse has dropped to 80. Mental condition satisfactory. Has been placed upon an iron tonic.

February 9. Has remained very well mentally until now, but to-day shows a tendency to relapse. Is somewhat stupid, and inclined to be impulsive. Was immediately put to bed again and given a cathartic. Brightened up at once, and went on steadily to recovery.

On February 28, weighed 119 pounds; on March 8, 126 $\frac{3}{4}$; March 14, 133 pounds; March 18, 136 pounds. On March 12, menstruated. On March 25, was discharged recovered.

J.C., female, æt. 34; married. A case of puerperal melancholia with stupor. Was insane five weeks before admission. Admitted September, 1894. Her delusions were those characteristic of her form of mental disease, and there was a marked degree of stupor, as well as a certain amount of excitement, at the time of admission.

In December, 1894, in spite of every endeavor in the way of feeding and building up, the patient began to fall back, and the stupor became pronounced. The patient's habits were dirty; memory deficient, and at times she was markedly resistive.

January 24, 1895. She was put to bed preparatory to commencing thyroid feeding. Her weight was 102 pounds. The dose of thyroids prescribed was fifteen grains three times a day.

January 27. Face flushed; much better mentally; less resistive, although inclined to be excited.

January 29. Temperature, 98 $\frac{2}{5}$ °; pulse, 75; respiration, 15. Face flushed; brighter expression. Same dose of thyroids.

January 30. Temperature, 99 $\frac{4}{8}$ °; pulse, 100; respiration, 18. Marked improvement in habits.

February 3. Temperature, 99; pulse, 80; respiration 17. Says she feels better. Exfoliation of skin of face and lips.

February 4. Very restless. Treatment discontinued. Put on iron, quinine, and nux vomica.

February 9. Sitting up to-day; talks rationally, and has written to her home.

February 17. Has been quite well until to-day; has become resistive again.

February 19. Still dull. Ordered calomel and a saline.

March 3. Improving. Has developed a large appetite and is gaining in weight.

March 10. Decidedly better.

March 25. Has gained seven and a half pounds in two weeks.

April 10. Very much better than formerly ; went home on probation.

May 29. Reported better, and getting along nicely at home ; doing some housework, etc., although not completely restored mentally.

August, 1895. At home, and keeps well.

These investigations on thyroid feeding in mental disease are, I believe, the first recorded in America, and open up a field for clinical research that must prove of interest to the thoughtful student

URETHRAL CARUNCLE.

By L. M. SWEETNAM, M.D.,

Lecturer on Therapeutics in the Woman's Medical College; Surgeon to the Outdoor Clinic, Toronto General Hospital; Surgeon to St. Michael's Hospital.

FEW diseases entail anything like the amount of suffering, in proportion to the area of surface involved, as does urethral caruncle. My attention has been lately drawn to this subject by seeing two patients treated by me, upwards of three years ago, for a persistent form of this trouble, and in whom there has been no recurrence. As the treatment adopted was one I have not seen recommended, I wish briefly to call attention to it.

First, a word as to the condition itself. The cases we have seen are naturally classified under two heads. First, those developing in persons of middle life, in whom the growth is about the size of a pea, or somewhat greater, are single with a more or less distinct pedicle; or multiple of smaller size, raised, but sessile. In either case, the base is usually circular and well defined. Second, the other class of cases is very commonly seen in delicate girls between sixteen and twenty-two; sometimes, however, later in life. Here the condition is different. The caruncle (for such we would call it, although it differs much in appearance from those already referred to) is not clearly circumscribed. We have near the meatus, and, if the condition is one of long standing, probably surrounding it, and extending into the urethra, as well as out upon the vaginal mucous membrane, an exquisitely sensitive and somewhat elevated patch, made up largely of dilated capillaries. From its edges enlarged vessels frequently run for some distance into the surrounding tissues.

The first class of cases are the more easily dealt with. If the caruncle be single, and just within, or without, the meatus, Sim's treatment, of excision, and with a stitch drawing the mucous membrane over the stump, is satisfactory. If the caruncle be multiple or situated well within the urethra, the usual treatment has been, after snipping off the growth, to cauterize the stump with nitrate of silver or carbolic acid. The text-books acknowledge that, after this form of treatment, recurrence is the rule. The explanation is not difficult to see. The vessels have been destroyed on a level with the mucous membrane, the destruction has not been carried deep

enough to remove all the diseased portion of the vessels, and, as the disease spreads by extension, the recurrence is but a matter of time. The treatment which I urge for the second class of cases, especially, and which I have found to be best suited to the cases of multiple caruncle within the urethra, is electrolysis. The condition found in the second division is one in which excision and ordinary caustics cannot be used to advantage, for, if all the diseased vessels be excised, or destroyed by caustics, not only will the glandular stricture of the urethra, where this is the site of the growth, be sacrificed, but we will have a secondary cicatricial contraction, which will leave the patient in a condition almost as distressing, and much more difficult to relieve, than that for which she sought treatment; whereas electrolysis, carefully employed, will destroy the enlarged vessels without producing any material destruction of healthy tissue, and, therefore, producing no serious cicatricial contraction. A gold or platinum needle, in a suitable holder, is employed. The needle is connected with the positive pole of the battery. The sponge, connected with the negative pole, is applied within three or four inches of the meatus. A constant current of about 5 m. strength will be sufficient. This will be generated by five or six Leclanche cells in good condition. The needle is passed into the diseased area (anæsthetized by application of a four per cent. solution of cocaine) to a depth of one-sixth or one-quarter of an inch. The puncture should be made into, or as near as possible, one of the enlarged vessels, and left in position two or three minutes. The smallest amount of cauterizing which will prevent bleeding, on withdrawing the needle, should be employed. Four or six punctures, depending on the extent of the disease, may be made at a sitting, and sufficient time should elapse between sittings to prevent any great irritation. In this way the diseased vessels may be destroyed for some distance beneath the mucous membrane without injuring, to any serious extent, the normal tissue. The application should be continued until all unhealthy vessels have been obliterated, and the case seen, say, once a week, until the parts have regained their normal appearance. Tonics should be administered until a satisfactory state of health is not only secured, but established.

As in young persons the condition frequently develops while the patient is in a debilitated, anæmic condition, such as is often responsible for extensive varices elsewhere, and in those of more advanced years in connection with chronic constipation or diarrhœa, or continued standing, it would appear that the difficulty is venous rather than arterial in origin. The arterial appearance of the blood would be accounted for by the fact that the dilated condition of the capillaries allows the blood to pass so readily from the arteries into the veins that it retains its arterial characteristics. We may even have a distinct pulsation in the involved area.

Selected Articles.

THIRD REPORT ON ELIMINATIVE AND ANTISEPTIC TREATMENT OF TYPHOID FEVER.

By W. B. THISTLE, M.D., L.R.C.P. LOND.,

Assistant Demonstrator of Anatomy, University of Toronto; Lecturer on Diseases of Children, Woman's Medical College; Physician to Victoria Hospital for Sick Children.

REGARDING the immense amount of energy and effort expended in the study of disease-producing fungi or bacteria, it would be but mere commonplace to say that all the accumulated knowledge, the result of such expenditure, can be of little worth, apart from gratification of scientific curiosity, until it can be brought to bear directly upon the treatment of disease due to these organisms. Assuredly, too, the more accurate and comprehensive a knowledge of bacteria is gained, the more clearly outlined become the indications for treatment. In order to have this harmony between pathology and treatment, it is necessary, in the first instance, to be as fully informed as possible concerning the invading micro-organism, and how and why it is able to bring about the tissue changes and clinical symptoms peculiar to it; and, in the second, to remember and constantly to strive to apply that knowledge when the diseased condition appears.

With special reference to typhoid infection, it occurred to me, some three years ago, that the treatment advised in current text-books, and that almost universally taught, did not follow at all closely as a logical sequence on what had been ascertained concerning the nature and pathology of the disease; that there was, in fact, a lack of harmony between pathology and treatment. Accordingly, I attempted a plan of treatment which seemed to me to embody the application of valuable facts relating to the infective germ, and the way in which it brought about disturbance and destruction in the human body. Two years ago I published this plan of treatment in THE CANADIAN PRACTITIONER (April, 1893) under the title of "Eliminative and Antiseptic Treatment of Typhoid," and with it all the cases so treated. In 1894 a second paper under the same heading

appeared in the *Medical Record* of March 10th. To this second paper I appended an analysis of forty consecutive cases without fatality, and running a course unusually short and unusually free from distressing symptoms, and from what have been spoken of as the accidents of the disease.

I now beg to make a third report, and in doing so I shall in no way alter the original title, for nothing, to my mind, would so clearly indicate the principles of treatment as the two words "Eliminative" and "Antiseptic." I shall also still adhere to what seemed to me on the former occasions the correct way to approach a discussion of this kind, and first gather together, as completely and as concisely as I may, what has up to date been determined by bacteriologists and pathologists concerning the germ itself, and also the relation which it bears to the lesions and symptoms of the disease. By so doing it becomes easier to appreciate consistency or want of consistency in the principles of treatment which I shall have to bring forward, as well as in those which are generally accepted and taught.

It is, of course, past question that enteric fever is the result of bacterial infection. So far, all are agreed ; but when it comes to giving credit to one particular variety, there is by no means a like unanimity. There are those who attribute everything to Eberth's bacillus, while there are many observers who are of the opinion that other bacilli, as well, are responsible for part at least of the disturbance. The bacillus coli communis, particularly, is by many considered to produce much of the toxæmia. Others, again, urge that Eberth's bacillus is simply a modified form of common colon bacillus. The great difficulty in distinguishing Eberth's bacillus from the bacillus coli communis perhaps accounts for these varied views. There are, however, many apparently sufficient reasons for believing that common bacillus of the intestine is responsible for a portion of the disorder, even though Eberth's bacillus be recognized as the primary and chief aggressor in the disease. There is the primary fact, with reference to the bacillus coli communis, that it is capable of producing toxæmia even to a fatal degree. Treves,* in his paper on peritonitis, describes the condition, when associated with intestinal disease and injury, as one of poisoning from escape of these bacteria from the injured or opened intestine, followed by rapid spread over peritoneal surface, with correspondingly rapid absorption of the toxic substance to which they give rise. It may, then, be taken as proven that the bacillus coli communis is poisonous. Under ordinary circumstances, the quantity absorbed is not sufficiently great to give rise to symptoms. It is more likely, though, that immunity from this constant poison is due to the functional activity of the liver in

* British Medical Journal, January, 1894.

intercepting and destroying these harmful substances.* Treves,† also, expresses the opinion that, under certain circumstances, the common bacillus of the intestine becomes more virulent, which is quite in keeping with what has been determined in experimental growths of other forms of bacteria. It is maintained by others that this increase in virulence occurs when it is associated with Eberth's bacillus. However, looking at the condition which prevails, say, in the first week of typhoid, it becomes evident that many forms of bacillus are to be found throughout the intestinal canal. Owing to a lack of secretion, food materials are not digested and absorbed, but the mass remains to be broken up by the ordinary germs of putrefaction, absorption of toxic products of course taking place. It is only necessary to imagine this process repeated and continued to be convinced that many forms of bacteria are present in addition to Eberth's bacillus and the bacillus coli communis, and that some portion of toxæmia must be attributed to these putrefactive or unclassified germs. Given Eberth's bacillus as the primary cause, it requires no argument to prove that other forms must play a part in the production of symptoms.

We have only to recall the manner in which bacteria bring about disturbance, by virtue of the toxic substance which they produce, to perceive clearly that the condition in typhoid is one of continuous intoxication. The primary and chief source of the poison is the alimentary canal, although it should not be forgotten that some portion of toxæmia must be attributed to poison elaborated by bacteria which have been carried from the intestine and deposited in the various tissues of the body, notably in tissues most directly connected with the alimentary canal, *e.g.*, lymphatic nodes of intestine and mesentery.

I am fond of comparing the prolonged poisoning of typhoid to the commonest intoxication we are familiar with, *e.g.*, alcoholic. Typho-toxin and alcohol are each the result of bacterial action, under certain conditions. One process takes place within the body, the other without. Each poison has, in the main, its characteristic train of symptoms. These symptoms are the physiological effects, and from a survey of these signs we can estimate approximately the degree of poisoning, always remembering that, as with alcoholic poisoning so with the toxæmia of typhoid, individual peculiarity may play a part; that certain conditions may increase susceptibility, while certain other conditions may have a directly contrary effect. It must be remembered, too, that in neither case are we always dealing with the pure drug. With alcoholic poisoning must be included frequently poisonous effects arising from introduction of those substances usually separated and removed. Making allowance, then, for these conditions and peculiarities, it remains true that, just as we judge of the degree of

* Lauder Brunton : Disorders of Digestion.

† Treves : British Medical Journal, January, 1894.

intoxication from the appearance and actions of the drunken man, so in the case of typhoid we can read in the symptoms the amount of toxin in the system.

With reference to the local effects of typhoid poison we are not able to estimate so accurately their degree. We have, however, a few valuable facts concerning the effects of typhoid toxin : (1) That it will irritate tissue cells and produce swelling, congestion, and infiltration, of the part. (2) That, if it becomes concentrated to a sufficient degree, the irritation is replaced by complete destruction or necrosis. (3) That necrosis may be brought about, not so much as a result of concentration of poison, but owing to long continuance of contact* (Sims Woodhead). It is only in the case of the grosser destruction of tissues, *e.g.*, in the intestinal lymphatics, that this local or "caustic" effect can be considered quite apart from those derangements of function which depend largely upon the local effect widely distributed, *e.g.*, rapid tissue waste or increased rate of molecular death from widespread irritation. It is, then, safe to assume the local effect whenever the general symptoms are present. To state it concisely, there is in typhoid fever infection of the body by bacterial growth, which brings about a condition analogous to fermentation, with the production of a chemical substance, "typho-toxin," which, when diffused through the body, gives rise to general symptoms, and, where concentrated, to irritation or complete destruction of tissue.

Facts to be carefully noted are : (1) That general symptoms are increased or diminished according to the amount of poison in the body, or dosage. (2) That the extent or degree of local lesion is determined by the degree of concentration of the poison and the duration of contact.† Fenwick and Bokenham have succeeded in isolating an albumose from the spleens of those who had died in the third week of typhoid fever. Experimenting with this substance on animals, they found that if it be injected in quantities exceeding 0.02 gramme per kilo of body-weight, there is invariably elevation of temperature and anorexia. The more the dose is increased above 0.02 gramme per kilo, within certain limits, the higher the temperature. If injections above this quantity are given on alternate days, there is persistent elevation of temperature with anorexia and rapid diminution of body-weight.

Leaving the consideration of what has been determined concerning the poison of typhoid and its action on the organism, let us turn to consideration of the way in which infection takes place, and how the fungi become established in the human body. Whether we say infection is due to Eberth's bacteria or to a modified colon bacillus, it most assuredly comes from without. For the purpose of this paper, it is taken in with contami-

* Woodhead : Bacteria and Their Products.

† British Medical Journal, April 13, 1895, p. 801.

nated water, is not destroyed in the stomach, and takes on active growth in the small intestine. Very shortly large numbers of intestinal lymphatic nodes become swollen and congested as the result of the invasion of bacilli which have come from the intestinal contents. Shortly, the mesenteric glands become affected in the same way, and after a time bacilli may be found in clusters in many parts of the body. In a former paper I ascribed the apparently selective tendency of these organisms for the solitary glands as due simply to the anatomical arrangement by which each lymph-node became, as it were, a small reservoir, into which bacteria and poison were conveyed by the numerous lymph-ducts which drain the surrounding area of intestinal surface.

This "hiving" or concentration makes it clear why the intestinal lymph-nodes almost invariably present a marked degree of local change. There are those who maintain that now, although there may be and usually is infection of lymphatic glands for several feet, as well as of other tissues, the infective micro-organisms are no longer to be found in the intestinal contents. But after some time, about the eighth* or ninth day and during the remainder of the attack, they may be found in the bowel discharges.

When one stops to consider it, this seems an improbable thing, for, in the first instance, the contents of the intestine must have been favorable for growth at the time the intestinal lymphatic nodes and the body generally became infected. Then, in the second, it is necessary, in order to have simultaneous invasion of many glands scattered over several feet of intestine, to presuppose that the bacilli taken in with the glass of impure water must have multiplied to some considerable extent. Now, how comes it that after this widespread infection of the intestinal glands the bacilli are no longer able to flourish in the intestinal contents? They most assuredly have been able to exist and flourish there, and, according to those who hold the view I have mentioned, after this disappearance they return again, and once more find the conditions suitable. From this time, as early as the eighth or ninth day (Klein), until the termination of the disease, they continue in the intestine.

I confess that this theory of presence in the intestinal contents, followed by disappearance, and again by reappearance, is hard to understand. To those who urge that it is exceedingly difficult to distinguish Eberth's specific bacillus from certain forms of common colon bacilli, or to those who maintain that typhoid is due to a virulent form of colon bacilli, this difficulty does not present itself. According to them, the specific germs may be present in the intestine throughout the first days of the active disease, as well as during the period coincident with infection of the intestinal lymphatic nodes, and that period remaining after the first ten days or fortnight.

*Klein : British Medical Journal, October 13, 1894 ; and Hirschfeld : British Medical Journal, April 20, 1895, p. 869.

Leaving these diverse views, and taking into consideration the facts of the case only—whether it is decided to have a specific Eberth's bacillus or modified colon bacillus, or whatever may be decided as to name—it becomes clear that the infective germ must have been present in the lumen of the intestine in order to have infected the intestinal glands, and there in very considerable quantity, in order to have produced infection simultaneously in so many glands scattered over so great an extent of surface.

It is also beyond a doubt that the specific germ is present in the discharges during a portion of the period which follows infection of the intestinal glands, because whole epidemics have been traced to contamination from active cases. Besides, there is no disagreement concerning their presence during the later period. Now, what reason is there for the assumption that the intestinal contents possess immunity during this intervening period?

Then, are we to assume that migration of bacilli from the intestinal contents to the intestinal lymphatic glands is fully completed before any constitutional symptoms arise? Such a theory is manifestly unreasonable, yet unless we maintain it absolutely we must admit that the infectious germs which give rise to the disease form part of the intestinal contents in the early stage of the disease. In other words, the process of invasion of the glands is coincident with the earlier symptoms of toxæmia.

When all are agreed that it is impossible, from a morphological standpoint only, to distinguish a specific typhoid germ from the colon bacilli which are always present, and when many bacteriologists maintain that there are no specific germs apart from the modified colon bacillus, it does seem unnecessary to assume this period of absence, leaving out of consideration altogether the manifest absurdity which I have just shown this theory to involve.

I have devoted some space to this question, because since I first advocated active treatment of typhoid objections have been raised on the ground that in the early stage of the disease no specific bacteria are to be found in the intestine.

Let us, now, turn to the question of treatment of the condition arising from the infective process briefly described above, and in so doing adopt the plan indicated in the beginning of this paper, to arrive at the treatment by applying the knowledge possessed of the infective germ, and all relating to it. It can scarcely be said that this has been the plan adopted in arriving at the treatment of the past. Until recently treatment was nothing. In many countries "let alone" is still the vogue.

In my first paper, I stated that I believed all the indications furnished by a study of the morbid process were met by the adoption of a plan of treatment embracing three distinct heads or principles: Elimination, anti-

sepsis, and dilution. I still adhere to that belief. Elimination is accomplished by free and continuous purgation, as well as by the flushing action of large quantities of water on kidneys and bowels. By the use of purgative medicines the infective process is disturbed in several ways : (1) Bacilli are carried out of the intestine, together with the toxic substances produced by them. (2) Poison held in solution by the body fluids escapes with the free secretion into the intestine ; and besides, at frequent intervals, a quantity of what, in this instance, must be extremely toxic bile is swept away, instead of continuing in the circuit from the liver to the intestine and back again. If constantly relieved in this way, the liver can more frequently perform its *rôle** of standing guard and intercepting toxic substances which would otherwise reach the general circulation. (3) Infection of intestinal glands is limited, or, in other words, the source of supply from which bacilli and poison are carried from the intestine is cut off. That is, just as you can and do limit the dose of poison received by the system generally, so do you limit the local dosage and consequent injury of the intestinal glands by the same means. This surely requires no argument, it is evident, if only one stops to recall the manner in which infection takes place. In the one case, lessened dose means milder symptoms, and, in the other, the smaller the local dose the less severe the local lesion.

Concerning toxin already absorbed and in contact with the tissues, held in solution by the body fluids, some portion of it must be removed with the secretion poured into the intestine, when stimulated by purgative medicines, as well as that drained off through the kidneys. There is nothing unusual in such a claim. We have many examples of removal of poisonous material from the body by similar procedure.

By repeating this process, it certainly tends to prevent a dangerous accumulation of toxin in the system, and, at the same time prevents, or tends to prevent, local lesion in the intestine from becoming sufficiently great to destroy a vessel, or extend entirely through the intestinal wall. It must not be forgotten that tissue resistance is increased just as the tissues are freed from the effect of the poison. Hence the tissue cells are in this way rendered more capable of resisting and destroying the bacilli already present in them. It is obvious, too, in order to escape harm, the earlier elimination is brought about and the more constantly it is secured, the better, whether with reference to general symptoms or local lesion. In many instances, I believe, brisk purgation in the early stage carries out so much of the culture and relieves the tissue to so great an extent that the remaining bacilli are destroyed by the liberated tissue and the fever is aborted.

When this is not accomplished, or when the case is not seen early, then purgation must be prompt and energetic enough to relieve danger-

*Bouchard : Auto-intoxication in Disease.

ous conditions, and continuous enough to keep the dose of poison below a harmful point, if possible, until such time as immunity is reached. In judging of the amount of poison present, attention should not be exclusively directed to one or two symptoms, but the entire list of symptoms should be considered.

Coming now to the second feature in treatment, that is, attempting to destroy micro-organisms by antiseptics, there can scarcely be doubt about the possibility of doing this to some degree. It is quite possible to completely deodorize the contents of the intestine by means of salol or salicylate of bismuth, and, no doubt, by other agents, as any one can demonstrate. But, to be efficient, antiseptics should be used in association with purgatives for the following reasons :

(1) Just as it is easier to approximately sterilize an abscess-cavity after first having emptied it, so is it to derive benefit from intestinal antiseptics if the intestine be first cleared of its contents.

(2) Intestinal antiseptics, while lessening the production of poison by destroying bacilli, yet could have no possible effect on the poison already in the intestine, but in many instances might themselves add to the toxins present.

(3) Much larger quantities of antiseptics can be used without poisonous symptoms arising, if, at the same time, elimination by the bowels is continuously maintained. Any benefit derived from an antiseptic is obtained at once, and, if it is speedily cleared away, much which would otherwise be absorbed escapes with the contents of the bowels.

The remaining factor in treatment is clearly indicated, for the local effect of the poison depends upon its degree of concentration, as well as upon duration of contact.

Injection of large quantities of fluid is a necessary adjunct to elimination. Fluid drained off, continuously carrying with it the poisonous material it contains, must be replaced. If this were not done, the tissues would suffer from lack of fluid, and the toxin remaining would assume a more concentrated, and therefore a more active, form. It might be well, at this point, to consider elimination by purgation in its relation to certain accidents of the disease, *i.e.*, hæmorrhage and perforation. I do not propose to enter into the question at length, but shall content myself by pointing out that, if it is true that the local lesion is proportionate to the local dosage and duration of contact, and if it is true that the toxin and bacilli, which would otherwise reach the lymphatic glands, can be carried out by purgation, then it must be that elimination by purgation tends to lessen the occurrence of both hæmorrhage and perforation.

In the late cases the indications are the same. If a vessel is already necrosed, hæmorrhage is unavoidable ; if not already necrosed, the way

to prevent it becoming so is by removing the poison. With reference to this point, I beg to refer to the paper in *THE CANADIAN PRACTITIONER* of April, 1893, or to the *Medical Record* of March 10, 1894, where I have discussed this question at length. I still maintain the same conclusion, that purgation at no time causes perforation or hæmorrhage, but at all times tends to prevent its occurrence. Misconception regarding this matter was the great barrier which interposed whenever an attempt was made to follow in treatment the indications furnished by study of the morbid process. So great was the dread of these two accidents that the fact that the great majority of fatalities were due, not to hæmorrhage and perforation, but to toxæmia, was lost sight of. A study of the cases I have to report with reference to this point will, I believe, convince the most skeptical that formerly a misconception did exist.

So much for meeting the indications furnished by consideration of what has been determined concerning micro-organisms on paper or in theory. How does it work out in actual practice? Precisely as it does in theory.

I have to report 172 cases with a mortality of five or three per cent. No cases were excluded, late cases are taken as well as early. Forty-four of these were my own patients. Forty-one cases were treated at the Toronto General Hospital, to a considerable extent under my own direction, and in every instance under my observation. The remaining 87 cases were furnished me by several medical friends, with two exceptions resident in Toronto.

I have excluded none from my list, whether coming under eliminative treatment early or late, provided only that the treatment had been fairly carried out from that time. Concerning the cases received from others, I can only speak in general terms. All these cases were reported as having done well, with two exceptions, and the treatment gave results such as I have indicated in the papers published. One case died from hæmorrhage, and one from pneumonia during early convalescence. The hæmorrhage case had been ill in the country while nursing a case of typhoid; returned to the city, and, after two weeks' illness, was again taken to the country. When seen she was comatose, had tympanites, and temperature of 104° F. Given saline in drachm doses every four hours, and shortly the temperature fell, tympanites disappeared, and consciousness returned. On the third day at 12 a.m., she had a slight hæmorrhage, and the saline was discontinued. Next day, at 5 p.m., she had a severe hæmorrhage, and died at once.

The case of pneumonia occurred in an alcoholic, and, in my opinion, it is doubtful whether he ever had typhoid. However, I have included his case in my list. In two other cases hæmorrhage occurred, but treatment was persevered in with favorable results.

Coming now to my own cases, forty-four in number, I had one death from pneumonia, following a very severe attack, in a boy nine years of age. In this case, too, there was slight hæmorrhage, which I thought might come from the rectal veins, as it was small and bright in color. The autopsy showed a remarkable condition of the intestine. Although death took place in the fourth week, two minute ulcers only were found in the ileum, but the intestinal glands throughout were swollen.

The forty-one hospital cases gave two deaths. One from hæmorrhage, where the autopsy showed the presence of ulcers from the ileum as far down as the sigmoid flexure. She had been in the hospital eight days when death occurred. This case presented symptoms of severe infection, high temperature, distension, and a dusky expression. She did well until the hæmorrhage occurred. This was slight at first. The purgatives were discontinued and opium given until termination fatally from extensive hæmorrhage.

The second fatal case occurred from hæmorrhage from the stomach and nose with general purpura, hæmorrhage in every part of the body. Autopsy showed a large number of ulcers, covered with black, dry sloughs. The patient died on the fourth day in the hospital. These five cases make up the entire list of the fatalities. Two died from pneumonia after recovering from severe attacks of typhoid.

The two fatal hæmorrhages occurred in cases coming under observation, certainly, in the third week of active illness. Both cases gave indications of profound and dangerous toxæmia, which disappeared as soon as elimination was secured.

Analysis of one hundred and seventy-two cases. Mortality of three per cent. No death from toxæmia. No perforation. Hæmorrhage in eight cases, including the two fatal cases. My own single case of hæmorrhage was so slight that I attributed it to rectal engorgement. In all the cases where I had opportunity of observing, except the two fatal cases, the amount lost was small.

Tympanites never developed in my own or hospital cases during treatment, and where present at first invariably disappeared as soon as elimination was freely secured. Delirium practically unknown after the first days, and I cannot recall a single instance where it was present after treatment became established.

Out of sixty-four charts in my possession, fifty-eight show that the highest temperature reached was in the first three days. That is, the temperature inclined toward normal as soon as elimination was secured. In many instances the chart shows decline in temperature as regular as a flight of stairs.

The pulse, contrary to opinion often expressed, improves with the

general symptoms, and it is no uncommon thing to have a pulse between seventy and eighty, strong and regular, after two weeks of continuous purgation. For example, average movements five per day for eleven days, pulse eighty; average daily movements four for eighteen days, pulse seventy-eight; average movements per day five for twelve days, pulse sixty-eight.

Diarrhoea, in my own cases, never required controlling treatment. The difficulty was rather the other way. In many instances, it is not an easy matter to secure sufficiently free movement, and different purgatives and expedients must be resorted to. Sponging as routine treatment twice daily, but in my own cases never required for reduction of temperature. Lately, many who are warm advocates of the cold bath or Brant treatment have arrived at an explanation of its action. It promotes elimination* of toxin by the urine, increasing the toxicity of the urine five times. Very good; but why confine elimination to the kidneys? Bouchard has shown that in health the bile discharged into the intestine contains just six times the amount of toxin that is discharged with the urine. In the event of unusually toxic processes occurring in the intestine, it is fair to conclude that the toxicity of the bile would be very greatly increased. If increased elimination of toxin is the great desideratum, one need not look far for a more direct method than that of immersing the sick man many times a day in a tub or a bed full of cold water. Besides, he is not likely to cry so loudly or beg so pitifully to be allowed to escape if elimination is promoted in some other way.

In short, under this method of treatment the striking feature is the absence or speedy disappearance, in practically every case, of the classical group of symptoms, delirium or coma, tympanites, subsultus, and the extremely foul condition of the mouth and tongue. The two following cases are examples of speedy improvement :

CASE 1. Alice G——, aged twenty-four, under Dr. J. E. Graham, was the first case treated in this way in the Toronto General Hospital, Dr. Graham kindly allowing me to supervise the treatment. When the treatment began she had already been seven days in the hospital. Had been given no purgative medicine whatever. She was dusky and drowsy, had decided tympanites, and muscular tremor. There was a well-marked pericardial friction rub, also an aortic regurgitant and mitral systolic murmur, all appearing within a few days. Treatment began on the 17th, and free elimination by daily doses of calomel and Rochelle salts secured. Improvement every day. Tympanites completely gone on the 20th, and on the 24th the temperature became normal and continued so. At the same time a perfectly typical rash was present.

CASE 2. Also a patient of Dr. J. E. Graham in the General Hospital.

* Burr : Chicago Medical Recorder, October, 1894, p. 229,

I was asked to see him in the absence of Dr. Graham. He had been ill for two weeks, and had been in the hospital five days. Temperature, 104.2° F., when seen on the evening of the fifth day (Thursday). At the time of my visit he was profoundly unconscious, with greatly distended abdomen, stertorous and rattling breathing, jaw fallen, tongue dry, tremulous and spasmodic conditions of muscles, subsultus, and picking at the bedclothes. In fact, he seemed to be *in extremis*. I advised magnesia sulphate, half an ounce at once, and continued in drachm doses every hour, and plenty of fluid. In addition, in order to hold him until toxæmia should lessen, strychnine and whisky were given at intervals. This was on Thursday evening, the sixteenth, and on Saturday morning he was quite conscious. Purgatives were continued vigorously. Condition continued to improve, and on the 22nd the temperature became normal; subsequently it rose slightly, and again became normal on the 27th, to continue so.

In this case I am convinced the patient would have died in a very short time if the toxæmia had not been quickly lessened.

Charts 2, 3, and 4 are quite characteristic, and show the number of bowel movements daily. I have frequently been asked how much purgatives should be given in a day. One can have no fixed rule. The idea is to give enough to secure elimination, and the amount required is a matter of experiment in each case. Usually three or four grains of calomel in divided half-grain doses, followed by a saline in three or four hours, will result in free elimination. If not, compound cathartic pill (improved) No. 2, followed by sulphate of magnesia or other saline, or else sulphate of magnesia alone in repeated doses. At any rate, secure elimination quickly, it matters little how it is done. In many cases days are lost. The dose ordered to-day fails to purge. Next day another is ordered, still without result, no provision having been made in the event of the medicine ordered not being sufficient. In this way several days may go by, and, while the patient may be taking purgative medicine, he is certainly not receiving eliminative treatment. Indeed, I have known this condition of things to exist during an entire illness. Of course, treatment after that fashion must be due either to carelessness, or failure to grasp the principle in eliminative treatment.

THE PRINCIPLES WHICH GOVERN OPERATIONS FOR INFLAMMATORY PROCESSES IN BONE.*

BY ARPAD G. GERSTER, M.D.,

Professor of Surgery in the New York Polyclinic; Visiting Surgeon to the German and Mount Sinai Hospital, etc., New York City, N.Y.

WE shall consider at this lecture the principles which govern operations for inflammatory processes in bone. This is a subject of great importance, and one of special interest to the general practitioner, who must often take charge of cases of necrosis.

Extensive necrosis has its origin in acute osteomyelitis, in reality a phlegmon of the bone, a sloughing of the bone, analogous to suppuration in the soft parts, but more rapid and certain in its results because the bone permits no expansion, and the exudation sooner occludes the vessels which furnish nutriment to the part. Grave mistakes in diagnosis are frequent in this condition, the symptoms being mistaken for those of other maladies, especially acute rheumatism and typhoid fever. Acute osteomyelitis has, however, its places of predilection. It oftenest attacks the upper end of the tibia and the lower end of the femur. The symptoms of acute osteomyelitis are a chill following a traumatism of greater or less severity, or exposure to the weather. We may have rigors, with a temperature of 104° or 105° F. The tongue is coated, the breath foul, there is nausea, thirst, the eyes are bloodshot. The physical signs show the foot drawn up, the knee bent and painful. There is swelling; but the swelling is white, not red. There is a deep-seated œdema. The case may be mistaken for one of acute articular rheumatism. The patient is put upon the salicylates for three or four weeks, and the swelling gets larger and larger. Finally a needle is inserted and the presence of pus is demonstrated. We then hear that the rheumatism has led to an abscess, but when this abscess is evacuated the joint is found free. After the abscess a sinus remains which will not heal, and a probe shows at the bottom of this sinus a sequestrum, and then the eyes of the physician are opened. It was no case of acute articular rheumatism, but something else. Such mistakes

* Clinical lecture delivered at the New York Polyclinic.

are very frequent, and they are errors which it is very embarrassing to make. The patient does not get well, and your rival is called in at a time when the diagnosis is easy. His wisdom is really no greater than yours; but he is called at a time when the merest tyro could make a diagnosis. There is a fistula, there is a sequestrum, the treatment for weeks or months has been misdirected; the trouble is clearly due to the presence of dead bone.

Acute osteomyelitis may be mistaken, then, first, for acute articular rheumatism. It may be mistaken, in the second place, for typhoid fever. The patient has some of the most prominent symptoms of typhoid fever. He is unconscious unless violently aroused, and then gives but stupid answers. The temperature is 105° F., and the patient is so dull that he allows you to take hold even of the inflamed area. I recall two such cases which were treated for weeks as cases of typhoid fever. A careful physical examination will, however, reveal the abscess, and with the evacuation of the pus the typhoid symptoms disappear. This patient's typhoid fever has been cured with the knife.

Acute osteomyelitis may be in the child mistaken for spinal meningitis. The general symptoms are similar, and only a careful physical examination will prevent you making a mistake. The diagnosis should be made promptly in these cases, however, not only for the protection of the physician's reputation, but because by prompt treatment we may save the bones from necrosis. In the old books on surgery—Sir Astley Cooper, for instance—this condition is called purulent or suppurating periostitis. The pain is excruciating, indescribably intense, due to the absence of a vent, the pus being confined under the tense periosteum. The first indication, then, is to use the knife and cut through the periosteum to the bone, and not to permit the tension to increase so that it must result in necrosis. In a neglected case the violent symptoms of the onset spontaneously subside after a certain period, the local pain is suddenly alleviated, the temperature falls, and a doughy swelling appears. The periosteum has been penetrated, and the pus has obtained an exit. The improvement lasts for several days, but the external swelling increases, and we have a repetition of the former symptoms, although not accompanied, perhaps, by the same violent pain. Often the patient does not go to a physician at all, or he goes to a physician and his condition is not recognized until necrosis has occurred, and we have dead bone, with one, two, or three cloacæ leading out from the sequestrum, and the discharge is interminable. In such a case, feeling sure that your line of demarcation has formed and that the necrosed portion is separated from the healthy bone by a mass of granulations, what shall be your action? Formerly the dead bone was extracted, if possible, or if too large for an easy extraction was broken up, and the expulsion of the pieces

was left to nature, the surgeon merely pronouncing a benediction over the process, which often required years for its completion. Formerly great hæmorrhage was unavoidable in operations upon these bones, as the theca is highly vascular. The surgeon feared the laying open of the theca, and contented himself with making a small hatchway into it, and breaking up the sequestrum with forceps. He expected suppuration to follow, and it did follow. Where the surgeon thought that he had removed the fragments, a large flake of bone would separate later, and a second operation would be required. The results were sometimes good, but more often unsatisfactory.

At the present time we find a great ally in the artificial anæmia we are able to establish in the limb. We now shut off the blood-supply, so that we not only avoid loss of blood during the operation, but we have also a dry, clean wound in which to work. We can see what we are doing; it is no longer necessary to sponge as formerly, and when we reach dead bone we are able to recognize it.

Secondly, we no longer dread a large opening into the cavity. It is our routine practice to take off the whole roof of the cavity and to freely expose the sequestrum *in situ*. We then gently lift the sequestrum from its bed as a silver spoon is lifted from its velvet case. We use no violence whatever in the manœuvre, we simply lift it from its bed. Should resistance be met with, and one or another projection of the sequestrum still be held in a recess, the roof of this recess is also taken away, until the sequestrum can be raised without breakage.

Thirdly, the suppuration which formerly followed this operation has now, by our antiseptic methods, been reduced to a minimum. We have also certain advantages in improved methods of operation. We have, first, Neuber's method of closing the cavity. Having removed the roof of the cavity with the chisel and mallet, and having withdrawn the sequestrum and scooped away the unhealthy granulations which line the cavity, we shall have left a healthy bleeding surface, in form resembling the inside surface of a trough, such as you see used in the country for feeding stock. We then dissect up the skin upon either side, and finally fix it in the bottom of the cavity. This is accomplished by means of steel nails and a few taps of the mallet, and primary union is the result. Formerly, six to twelve months were required for the filling up and cicatrization of a large cavity. Now three or four weeks are sufficient for healing. What a contrast this is to our former methods when we followed the fistula to the dead bone!—we took out a piece of the theca with the chisel, we broke the sequestrum into two or more fragments, and then attempted their withdrawal through a small opening. How often it happened that the sequestrum broke, leaving a mass in some distant recess, so that the

object of the operation was defeated. The cavity was stuffed with lint, suppuration continued until the cavity closed by granulation, or it did not close, when the operation had to be repeated. As regards the external incision, we no longer slavishly follow the fistulæ. For instance, I never make my incision on the inside of the femur, even though all of the fistulæ may be there. On the outside, between the quadriceps and the muscles of the back of the thigh, I find a region destitute of large vessels, and there I make my long incision, feeling sure that I shall find the sequestrum if it is present, whether I attack it from this or the other side. We no longer make a hatchway through the roof of the cavity, but remove the whole, so that we can follow the irregularities of the sequestrum and remove it intact. We scrape out all the granulations lining the cavity, so that a section of the bone shows a smooth surface.

Where the operation cannot be completed by Neuber's method, we have still another resource in the invention of the German surgeon Schede. This depends upon the well-known fact that in an aseptic wound a fresh blood-clot does not act as a foreign body. The granulations encroach upon it, and finally eat it up, as it were, or absorb it. This is the normal process of healing in subcutaneous fractures and many other injuries. A blood-clot forms between the ends of the bones. This organizes, and we have the foundation of callus as a result. By antiseptic precautions we approach the conditions of the subcutaneous fracture. Schede's method utilizes this principle. Where there is not much skin left, or where the skin is cicatricial and unreliable for the amount of tension required for the previous method, with a needle and a catgut or silk we sew up the outer wound, leaving only a small opening in the lower angle ununited by sutures. After the removal of the constrictor blood collects in the cavity, the surplus escaping through the opening in the lower angle. For the success of this method we must cover the part with a well-disinfected piece of rubber tissue or Lister's protective. Outside we apply the ordinary dry antiseptic dressing, kept in place with a roller bandage. The object of the rubber or protective is to prevent evaporation and to keep the clot moist. If the rubber were not used the clot would shrink, and the wound would again open up. Both of these methods are successful.

In operating for necrosis, you must be careful to leave behind no little spiculæ of bone or granulations, or you may be obliged to reopen and finally pack the cavity. It is better to prolong the operation ten minutes, twenty minutes, or half an hour, and make a thorough job of it, as you may thereby save the patient months of surgical treatment and suffering. If you have used no drainage-tube, the first dressing may be removed at the end of several weeks, or when its outer layers become foetid. This does not mean that the inner dressings or the wound are foetid. You have

often seen a foetid external dressing covering a perfectly clean and sweet dressing beneath. Many times have I left the dressing intact for four weeks in cases of excision of the knee-joint.

In Neuber's operation, however, we must open the dressing to take out the nails at the end of three, four, or five days. If agglutination has not occurred by that time it cannot be expected, and the nails are consequently useless. Where no nails are used the dressing is left undisturbed certainly for ten days or two weeks. With exceptions, these rules hold good, not only in operations for acute osteomyelitis or necrosis, but also for any chronic suppurative process or for tuberculosis.—From *International Clinics*, Vol. I., Fifth Series, p. 175.

Progress of Medicine.

THERAPEUTICS

IN CHARGE OF

GRAHAM CHAMBERS, B.A., M.B. Tor.,

Professor of Analytical Chemistry and Toxicology, Ontario College of Pharmacy; Lecturer
in Organic Chemistry and Toxicology, Woman's Medical College;

AND

WILLIAM LEHMANN, M.B. Tor.,

Physician to the Home for Incurables and House of Providence.

LOCAL ANÆSTHESIA.

Local anæsthesia, lasting about five minutes, can be quickly obtained by using the following mixture in a spray :

R.—Menthol, ℥ss.
Chloroform, ℥v.
Ether, ℥i.
M ft. nebula.

Sig.—To be used with a hand-spray.

FIRST AID TO PERSONS INJURED BY ELECTRIC CURRENTS.

Professor Gariel, of the Paris Academy of Medicine, presented a committee report at a recent meeting of that body upon the means to be taken in treatment of persons coming in contact with electric wires or apparatus. The following are the conclusions :

When a person meets with an accident due to contact with electric conductors or generators, the contact must first be broken, if it still exists, as otherwise those who come to render assistance may also become victims of the same accident.

The victim is to be carried to a well-ventilated room, from which all persons, except, at the most, three or four assistants, are excluded.

The clothing should be loosened at once, and efforts are to be made at the earliest possible moment to re-establish respiration and circulation.

To restore respiration, recourse should be had mainly to the following two procedures : rhythmical traction on the tongue and artificial respiration, but both must be continued for a sufficiently long time.

Lastly, concurrently with these procedures, the circulation should be stimulated by rubbing of the skin, flagellation of the trunk with the hand or wet towels, and any other means usually resorted to in such cases.—*American Medico-Surgical Bulletin*, February 1, 1895.

ETHYL IODIDE.

We again desire to impress upon professional attention the great usefulness of this much-neglected drug. Its extreme volatility renders its inhalation a simple matter. All that is necessary is for the patient to take the unstoppered vial in his hand, hold it to his nose or mouth, and inspire. Inhalation may be continued from two to five minutes, according to the effect produced, vertigo being the indication for its cessation. In the treatment of pulmonary and laryngeal tuberculosis, in syphilis of the air-passages, and in some cases of constitutional syphilis, it affords a ready means of local and systematic medication with iodine. It is an antiseptic of considerable power, and as such has been utilized in the treatment of acute pneumonia. In the relief of asthma, and especially of the asthma associated with hay fever, it is very often effectual ; for the latter purpose it may be combined with ether or chloroform when necessary. Care should be taken to get a pure preparation. The drug should be dispensed in amber-colored bottles, with glass stoppers. When amber bottles cannot be obtained, the vial containing the drug should be wrapped in black paper. It should be kept in a cool place. The development of a brown color, showing the presence of free iodine, indicates that the preparation has become decomposed, and is no longer suitable for use by inhalation.—*Philadelphia Polyclinic*.

SIMPLE TREATMENT OF GANGLION.

Duplay (quoted by *Lyon Médical*, No. 9, 1895) describes a simple, safe, and invariably successful treatment for this troublesome affection. This consists in the injection of a few drops of iodine into the cyst. Such injections must, of course, be practised under antiseptic precautions, the needle being driven in at the point where the cyst is most prominent, the skin having first been drawn aside so that a valvular opening is made. The cyst is not previously evacuated, but the iodine is driven directly in. A small antiseptic dressing is applied with a bandage. Cure is accomplished in five or six days. Sometimes in large cysts a second injection is necessary.—*Therapeutic Gazette*.

CHLOROFORM.

V. G. Stadnitzky (*Vratch*, No. 43, 1894) has carried out a series of elaborate experiments on seven healthy young men, in order to study the influence of chloroform, when administered internally, on the gastric functions. In each instance the experiment lasted fourteen days, being divided into two equally long stages, during the second of which the subject was given from three to ten drops of the drug (with water) three times daily. The author's general conclusion is to the effect that CHCl_3 markedly improves all the functions of the stomach, which fact suggests that the drug might prove very valuable in the treatment of various gastric disturbances, and, before all, in dyspepsia.—*British Medical Journal*, February 9, 1895.

DIGITOXIN.

Of the various derivatives of digitalis the one most constant in its effects, and more constant than digitalis itself, is considered by M. G. Corin (*Les Nouveaux Remèdes*, May 8, 1895) to be digitoxin. Although there has been much said against the constancy of its action, the author believes that it is entirely due to a false method in its prescription and use. In order that a fair judgment can be made, it must be administered according to the best method. It should not be forgotten, for instance, in the case of this alkaloid, that it is nearly insoluble in water. It is not alone necessary to dissolve it in water, chloroform, and alcohol, but it is also necessary to guard against its reprecipitation when it comes in contact with the fluids of the body; for if it is thus reprecipitated, its action may become cumulative when it is again absorbed in mass. Effects entirely dissimilar may thus be produced by the same dose. To avoid such results, the author employs the following formula :

R.—Digitoxin, gr. $\frac{2}{64}$ to $\frac{5}{64}$.

Chloroform, *m* x.

Alcohol at 90°, f̄3iii.

Aquæ dest., q. s. ad f̄3v.

Sig.—To be taken in three doses.

With this solution the author has never seen a reprecipitation when in contact with water or physiological fluids or serum. On the contrary, solutions in alcohol of twenty per cent. strength, which some authors have employed, reprecipitate under similar circumstances, thus explaining the failures which they have experienced in their experiments.

The drug has been used with excellent effect, and has proved clinically its superiority over the other alkaloids derived from digitalis in the treatment of cardiac asthenia and pulmonary weakness. The author has pub-

lished his experiments and clinical research that lead him to believe that digitoxin has a veritable abortive action in the progress of an infective pneumonia.—*Therapeutic Gazette*.

[The fact that digitoxin is insoluble in water should be an important consideration in the administration of digitalis. Aqueous preparations such as the infusion would not likely have any marked therapeutical effect.—ED.]

INTRAVENOUS SUBLIMATE INJECTIONS.

Görl gives details of nine cases of various forms of syphilis which he has treated in this way. He uses a solution of sublimate of 1 in 1,000, and injects 1 to 2 to 5 c.cm. As experiments have shown that the sublimate is not entirely excreted in the urine on the first day, the author gave the injections every second or third day. He has never seen unpleasant symptoms. The pain that was complained of in Blaschko's cases the author would attribute to the strong solution used. If the vein is properly entered, no pain is felt. The pain is caused by the escape of the solution into the connective tissue. The advantages of this method of treatment are (1) the small quantity of sublimate used; (2) the rapidity of the cure; (3) the absence of danger so far as at present known; and (4) that the treatment can be carried on without interfering with the patient's occupation. The disadvantages are (1) the impossibility of making the injections if the veins are not accessible; and (2) the rapid appearance of relapses. The latter is the most serious objection. These injections are to be used only when the intramuscular or subcutaneous injections are objected to, owing to pain, or when inunction or administration by the mouth is impossible. They are also indicated in the tuberculous or in those peculiarly susceptible to mercury, or when a rapid effect is necessary, as in cerebral syphilis.—*Munch. med. Woch.*

PILOCARPIN AS A SUDORIFIC.

Grandclément concludes from his experience of pilocarpin (1) that to produce general sweating, which he considers has been too much abandoned of late, one ought to employ the old methods as a rule, and use injections of pilocarpin only as the exception, as in some subjects the latter drug produces poisoning resembling that caused by nicotine or aconite; and (2) to produce local sweating, the old method of wrapping the part in cotton-wool and oiled silk is the best, as frictions with pilocarpin produce only an insignificant amount of sweating. In support of this latter assertion, he relates a case which was treated by him with local applications of pilocarpin combined with the old cotton-wool and oiled silk method. It was found that unless the latter was well applied, the sweating was practically *nil* in spite of the pilocarpin.—*Lyon Méd.*

VASELINE INJECTIONS IN OTITIS MEDIA.

F. Alt has, at Gruber's desire, systematically tested on some 250 out-patients Delstanche's method of injecting sterilized liquid vaseline (usually 1 c.cm.) through the Eustachian catheter. He finds it absolutely harmless and well borne. The following are his conclusions as to its value : (1) In chronic adhesive otitis of long standing, the injections are very useful, and much preferable to simple catheterizing and inflation. The hearing in nearly all cases is improved, and tinnitus lessened or even cured; sclerosis is but rarely benefited, and that slightly. (2) In chronic serous catarrh, the injections cannot take the place of paracentesis, and it is doubtful if they have any advantage over the air douche. (3) In acute otitis media the vaseline treatment does not appear to be indicated.—*Centralbl. f. ges. Therapie.*

SURGERY

IN CHARGE OF

L. M. SWEETNAM, M.D. Tor.,

Lecturer on Therapeutics in the Woman's Medical College; Surgeon to the Outdoor Clinic, Toronto General Hospital; Surgeon to St. Michael's Hospital;

AND

A. PRIMROSE, M.B., C.M. Edin.,

Surgeon to the Hospital for Sick Children, etc.

AN UNUSUAL CASE OF MULTIPLE HERNIA WITH HYDROCELE; STRANGULATED FEMORAL HERNIA; OPERATION; RECOVERY.

Ethelbert Collins, L.R.C.P. Lond., M.R.C.S. Eng., in *Lancet*, August 24, reports a man, aged sixty-five years, who had on the right side a complete inguinal hernia and a femoral hernia, and on the left side an incomplete inguinal hernia. There was also a hydrocele of the right tunica vaginalis. According to the patient's statement both inguinal herniæ appeared about ten years previously, and were caused by lifting heavy weights; he was, however, uncertain as to the duration of the femoral hernia. The hydrocele had existed about six years, having been regularly tapped twice a year.

On the morning of January 4, 1895, he was summoned to this case "as one of the man's ruptures had come down, and he was unable to get it back." When he saw him (about three hours after his rupture had come down) he presented the symptoms of a case of strangulated hernia, he had vomited several times, there was distressing hiccough, and pain in the region of the hernia and at the umbilicus. On examination he found that the femoral hernia was strangulated; it was about the size of a large walnut, tense, hard, and there was no impulse on coughing. He was unable to reduce it. He again saw the case in the afternoon with his brother, Mr. J. B. Collins, and they agreed to operate. After the patient had been fully anæsthetized, he again tried to reduce the hernia, but was unsuccessful. Having first tapped the hydrocele, which was rather in the way, as it contained twelve ounces of fluid, he proceeded to operate in the usual manner. The sac was excessively thick, and contained a small quantity of clear fluid and a knuckle of intestine; it was tightly gripped in the femoral ring. After making a few notches in Gimbernat's ligament the

gut was easily returned. He then ligatured the sac with carbolized silk and removed it, closed the wound, and dressed it with sal alembroth gauze and wool. Carbolic acid was used during the operation, and all the antiseptic precautions it was possible to take in an ordinary cottage were observed. The patient made an uninterrupted recovery, no rise of temperature or any unfavorable symptom occurred, and he was able to leave his bed on the twelfth day after the operation with the wound perfectly sound. On February 11, he was in good health, and, wearing a suitable truss, was walking about as usual.

He suggests that the man had an abnormally long mesentery, which might account for his several herniæ; the shape of his abdomen would indicate that he had, it being flattened above and bulging below.

A NEW BOBBIN FOR INTESTINAL ANASTOMOSIS.

• Mr. Herbert W. Allingham (*Lancet*, August 31) describes a new bobbin for intestinal anastomosis. He relates the weak points in the Murphy and Mayo Robson buttons, and proceeds to describe his improvements. He says it is to remedy various disadvantages that he has designed his bobbin. Its principle rests in the fact that it consists of two cones with their apices coming together to form the centre. The tubes are of bone or ivory, the shape of two hollow truncated cones with their lesser ends together, having the appearance of small dice boxes. These are carefully decalcified to within about three-sixteenths of the centre, leaving at the junction of the two cones a hard, unyielding portion upon which any pressure from the sutures is borne. The ends of the tubes are quite soft. There are several sizes, the most usual being :

Diameter of bore.	Diameter of end (outside).	Length.	Angle of cones.	Known as—
$\frac{1}{4}$ inch.	$\frac{5}{8}$ inch.	$1\frac{1}{4}$ inch.	150°	No. 1 size,
$\frac{3}{8}$ "	1 "	$1\frac{1}{2}$ "	140°	No. 2 "
$\frac{1}{2}$ "	$1\frac{1}{8}$ "	$1\frac{1}{2}$ "	140°	No. 3 "
$\frac{3}{4}$ "	$1\frac{1}{4}$ "	$1\frac{1}{2}$ "	140°	No. 4 "

They can be made in any other sizes required, but the above four sizes can always be had without delay from Messrs. Krohne & Sesemann, Duke street, Manchester square, W. This appliance is exceedingly simple, and appears to serve all the purposes required of a bobbin or button, for it keeps the parts at absolute rest; can be absorbed, as it is made of decalcified bone; and can be liberated without any absorption or sloughing of

the parts it unites. Moreover, from its shape it cannot, until the decalcified bone is absorbed, slip away from the seat of union, and when the sutures in each piece of intestine are tied the parts to be joined must be brought together, and yet no excessive pressure is exerted on the edges which it is desired to connect. In those bobbins for small intestine cases, seeing that the intestinal contents are liquid, the width at the narrowest point need not be more than one-half or three-eighths of an inch. Much larger ones are required for large intestine cases, as the intestinal contents are solid or semi-solid, viz., three-fourths of an inch. Its use may be most conveniently explained by presuming that two pieces of intestine are to be united end to end. Into or round each piece of intestine a fairly stout continuous silk suture is passed, which should include in each stitch the peritoneum, the muscular coat, and the mucous coat. Then one end of the bobbin is inserted into one piece, and the suture is pulled tight by a knot twice threaded, so that it will not slip, but the final tie is not made, until the other end of the bobbin has been inserted into the other piece of intestine. After this, one of the sutures is tightened up to its utmost; this brings the part down to the centre of the bobbin, for, as the bobbin consists of two cones with their apices pointing to its centre, the tighter the suture is drawn the more completely must it draw the intestine to the apex of the cone which has been inserted into it. A similar tying of the other suture brings the other piece of intestine down to the apex of its cone. Thus, from the shape of the bobbin, the parts to be united are brought into exact apposition, and, at the same time, are pressed together. A few Lembert sutures may then be inserted at various points, or a continuous Lembert suture may be used all round, if that be thought necessary. It is wise to scarify the peritoneum of the intestines with a needle for about half an inch round the seat of union. This scarifying promotes the exudation of lymph, which acts as a callus (just as in a fracture of bones) round the ends to be united. Especially should this be done if no Lembert sutures have been employed. The intestines when united cannot move in either direction, for the sutures, which are tied up tightly at the narrowest part of their respective cones, naturally cannot slip up to any broader portion; moreover, the bobbin itself cannot possibly alter its position either upwards or downwards.

A COMMUNITY WITHOUT VACCINATION.

Dr. Kerr, writing from Rabat, on the westerly shore of Morocco, states some facts that will serve to remind the anti-vaccinationists of England of the condition of their own country before the grand discovery of Jenner. Smallpox makes fearful havoc among the Moors, with whom Dr. Kerr has

lived seven years. During an epidemic at Rabat, over one thousand persons died from that disease in the course of two months. Rabat is a town on the Atlantic seaboard of Morocco, having a population of 26,000. Of the condition of the town during the epidemic, Dr. Kerr writes the following: "Often we felt it sickening when going through the streets to see young men and boys sitting at shop doors, flour mills, etc., covered with smallpox eruption, in every way facilitating the spread of the disease. Every one thinks that it is impossible for him to escape smallpox, hence no precautions are taken. It is painfully sad to see so many people who have lost the sight of one eye, while many are blind altogether. One day not long ago, I paid a passing visit to a *douar*, or collection of tents, outside the city, and it was touching to see the mothers bring their children, asking me to put the medicine in their arms to prevent the infection. I vaccinated all the children in the village, and, although they were surrounded by smallpox, none took it."

These conditions, given by Dr. Kerr as to the Africa of to-day, are a simple repetition of what existed in England and Europe before Jenner's great boon to mankind was made possible.—*Journal of the American Medical Association.*

OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

Professor of Obstetrics in the University of Toronto; Obstetrician to
the Toronto General Hospital.

ASSISTED BY

H. CRAWFORD SCADDING, M.D.,

Physician to Victoria Hospital for Sick Children.

KIDNEY OF PREGNANCY.

Tranteroth (*British Medical Journal*) finds that in about half the cases of pregnancy in healthy women, primiparæ or otherwise, a trifling amount of albuminuria is to be detected in the second half of pregnancy. In a minority of cases this symptom is not due to renal changes; in the majority it represents a special morbid condition, best termed "the kidney of pregnancy." As a rule, this condition involves no symptoms besides changes in the kidney. Eclampsia and œdema are rare. The pregnancy kidney never changes into the kidney of any chronic form of nephritis. There is no true nephritis of pregnancy. Albuminuria is the rule during labor, especially in primiparæ, and casts (usually hyaline) are to be found in almost a third of the cases. In the albuminuria of pregnancy casts are much rarer. The albuminuria of labor is most marked during the period of dilatation, and disappears rapidly during childbed, except when there is fever; later on, towards the second week, albuminuria usually indicates catarrh of the lower part of the urinary tract. The albuminuria of pregnancy and labor does not render chloroform dangerous. Renal disease, existing before pregnancy, is greatly aggravated by that condition, often ending in death of the ovum and abortion, after which the disease abates more or less. The causes of pregnancy kidney are the increase of intra-abdominal pressure, changes in the nutrition of the kidney brought about by the altered condition of the blood, and in special cases obstruction of the left ovarian vein which joins the left renal, and compression of the ureter by the foetal head. The last two causes apply to the kidney of labor (*Geburtsniere*), where also septic changes from pieces of foetal appendages play a part. The degree of the changes which make up the kidney of pregnancy depends on the resisting power of that organ in the individual patient.—*Kansas Medical Journal*.

TREATMENT OF EXTERNAL GENITALIA AFTER LABOR.

Dr. Ridgeway Parker, of Philadelphia, treats bruises of the external genitalia as follows (*American Journal of Obstetrics*): After delivery of placenta dip a large diaper in a pint of hot water with two ounces of fluid extract of witch-hazel. The cloth should not be too hot, and should be changed every fifteen minutes for three hours, and afterwards every half-hour to hour for six to twelve hours.

TREATMENT OF VAGINISMUS.

In an article in the *Provincial Medical Journal* for September 1, 1894, Madden states that he has based his treatment of this state on certain reasons, and has found it most successful in these cases, viz., first, the employment of constitutional nerve sedatives and tonics to allay the general neurotic condition; and, secondly, the application of local nerve-stretching to the affected parts. On the latter point the writer briefly recapitulates the steps of the local procedure which he has proved the efficacy of, and which he would, therefore, venture to recommend to other practitioners. First, then, the patient, properly prepared for an antiseptic vaginal operation, and the rectum and bladder evacuated, is to be etherized and placed in the ordinary left lateral semi-prone position; secondly, a large-sized bivalve vaginal speculum is to be introduced, and the blades then fully expanded; thirdly, a tampon of antiseptic cotton or wood wool, saturated in boroglyceride, is to be passed in through the speculum, so as to fill its calibre from the vulva to the roof of the vaginal vault; fourthly, the speculum, still widely expanded, is to be forcibly withdrawn, so as to overcome the contractility of the parts, and at the same time thoroughly stretch, or even slightly rupture, the affected nerve fibres. In so doing, some little abrasion of the vaginal walls may possibly be occasioned; but any hæmorrhage therefrom will be sufficiently controlled by the tampon, on which counter-pressure should be made during removal of speculum, so as to retain the included plug in the vagina, where it may be left for at least twenty-four hours, and then, at the same intervals, replaced by other antiseptic tampons, which should be employed for the next week to maintain the patency of the passage. Immediately after removal of these tampons the vagina should on each occasion be thoroughly flushed out with some antiseptic injection. Finally, if at the end of a week any evidence of vaginismus or spasmodic contraction should still remain, then the same procedure may be again repeated, after which it will probably be found that the passage has regained its normal sensibility and capacity. In some exceptional instances that curative result may not be thus obtainable, and in such cases it may possibly become necessary to resort to the removal of

any specially hyperæsthetic tissues in the vulva vaginal area, or else to some of the recent modifications of Sims' or Emmett's operations for vaginismus. These procedures will, however, be comparatively seldom required by gynæcologists, who may adopt the simpler and, according to the author's experience, generally effectual plan of treatment he has described.—*Therapeutic Gazette*.

ANTISEPTIC TREATMENT OF THE NAVEL IN THE NEWLY-BORN.

Schliep (*Therap. Monatshefte*, June, 1895) advocates antiseptic treatment of the stump of the umbilical cord after childbirth, instead of the usual dirty treatment commonly adopted. He mentions Schroder, who insisted on strict asepsis during and after treatment of the cord by means of antiseptic baths and treatment of the stump with dermatol, which hastened the process of mummification. By this means Schroder showed that many sources of infection were avoided, especially contamination by dirty bath water. Schliep advocates this treatment, but substitutes for dermatol a 2 per cent. solution of silver nitrate, applied twice daily by means of a brush. He states that the day after birth the stump begins to become dry and leathery, on the second day it has shrunk to a fifth of its normal size, and on the fourth day the treatment is complete.—*British Medical Journal*.

DILATATION OF THE CERVIX OF THE UNIMPREGNATED UTERUS.

Dr. Braithwaite read a paper before the Leeds and West Riding Surgical Society on a point in the dilatation of the unimpregnated cervix uteri. The point was that when the unimpregnated cervix was dilated, for whatever purpose, it was infinitely easier and more satisfactory to do it on the last day of the menstrual period, or when the discharge had just ceased. At that time the work was already done for us to some extent, and the tissues were so soft and elastic that dilatation could be accomplished to almost any extent in about twenty minutes, provided the patient was under an anæsthetic. If it were done for the cure of dysmenorrhœa, Hegar's dilators could be passed one after the other, up to, say, No. 15; if for the purpose of examining the interior with the finger, up to No. 17 or 18. In many cases very little resistance was met with, and there was none of the injury to the tissues likely to result at other times. The use of tents was done away with. The curative action in dysmenorrhœa was better than if the dilatation were done between the periods, for it was more free, and to cure a bad case of dysmenorrhœa the dilatation was considerable. This plan opened up a vista of utility in the diagnosis of small intrauterine growths.—*British Medical Journal*.

VIBURNUM PRUNIFOLIUM IN ABORTION.

Mme. Michailowa (*Meditzinskoje Obózrenije*, 1895) concludes from the trial in five cases that, contrary to the accepted opinion, this remedy not only does not always prevent abortion, but sometimes even occasions it, or, at least, accelerates a miscarriage already commenced. The hæmostatic action of the drug (two grains, in powder four times daily) was constantly observed, but in two cases, after the first day, contraction of the uterus followed, favoring the commenced abortion. In three cases, directly after the administration of a dose, contraction of the external os was observed. The author believes that, although viburnum may occupy a prominent place in the treatment of female diseases, it is not without danger in threatened abortion.—*University Medical Magazine*.

GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

EDMUND E. KING, M.D. Tor., L.R.C.P. Lond.,

Surgeon to St. Michael's Hospital ; Physician to House of Providence and Home for Incurables ; Pathologist, Toronto General Hospital.

GONORRHOÆAL PYELITIS AND PYO-URETER CURED BY IRRIGATION.

In the case of which I shall give a detailed account in this article, I have been able to realize one of the important benefits attainable by my new method of examining the female bladder and ureters (*vide John Hopkins Hospital Bulletin*, November, 1893, and *Amer. Jour. Med. Sciences*, January, 1894).

The patient came to me with an extensive accumulation of pus in the left ureter, extending up into the pelvis of the kidney. This was caused by a stricture of the vesical end of the ureter with a dilatation above it, associated with a gonorrhœal infection.

I treated the stricture by dilating it with a series of ureteral catheters, increasing in diameter from 2 mm. up to 5 mm.

After drawing off the purulent fluid, the ureter and pelvis of the kidney were washed out with medicated solutions. The calibre of the stricture was enlarged, reducing the quantity of the accumulation above it from 150 to 106 c.c. The purulent character of the secretion was removed, and all trace of gonococci disappeared.

My patient was sent to me by Dr. Stark, of Cincinnati, O. She was a married woman, slight, somewhat haggard-looking, thirty-one years of age. She had one child four years ago, without any special difficulty, her only pregnancy in six years of married life. The menses were regular and without pain. Headaches were rare ; the appetite was good and the bowels regular.

She was feeling depressed, and had lost weight, and complained of a severe pain on urinating, persisting for about a half-hour afterwards. She had also a sense of pressure in the bladder, and was obliged to urinate every two to three hours. The trouble was especially distressing at night. She had no acute pain, but an aching in the limbs, and lower abdominal

discomfort. The appearance of the urine as noticed by her varied greatly, being clear at times, and at other times containing much yellow sediment.

My examination showed that the vaginal outlet was torn back near the anus, but was well lifted up under the symphysis by an intact levator ani. The cervix was in the axis of the vagina somewhat low down, showing a slight tear, and the uterus was in retroflexion. There was no marked tenderness of the uterus, the left ovary was displaced downward and tender on pressure, but not adherent. On examining the anterior wall of the vagina, no special tenderness was developed on palpating the bladder.

The ureters were then palpated per vaginam, and the left distinctly felt to be harder than normal and somewhat thickened, but without marked tenderness. The left ureter also showed a displacement towards the pelvic floor.

The bladder was examined under atmospheric dilatation with the patient in the knee-chest position, through the No. 10. speculum. There were abundant evidences of a patchy, mild grade of cystitis. The field opposite the ureter, the posterior pole, and its surrounding area were of a mottled red, injected appearance, the vessels being entirely obscured; this injection increased towards the vault, where no normal background appeared. The vault over an area 4 x 5 cm. was covered by fine granules, averaging one or two to the square millimetre, most marked on the right side. The tips of each of these granules reflected the light, and gave the surface a bright studded appearance. On the left side, in places, the surface presented a superficial, worm-eaten appearance. On the right lateral wall, $2\frac{1}{2}$ cm. behind the ureteral orifice, was a ridge 2 mm. in height, extending downwards to the base of the bladder. Near the right ureteral orifice was an area of intense congestion presenting an oedematous appearance, surrounding the ureter, whose orifice could only be located by a little pallor in the form of a crescent.

Posterior to the right ureter was a superficial ulcer 2 x 3 mm., with a narrow, red border and a yellow centre.

The left ureteral orifice was situated on a truncate cone about 6 mm. in diameter at its base and 2 mm. at the top. It was slightly oedematous, and on the urethral side broken up by a number of irregular papillary eminences. The site of the ureteral orifice at the first examination was marked by a yellow spot of pus. On introducing a searcher into the opening of the orifice, a thin stream of pus escaped and ran down over the bladder wall.

Upon leaving the ureteral catheter in the left ureter for three minutes, 11 c.c. of dark fluid escaped, followed by 6 c.c. of fluid containing pus. In the twenty-four hours following the examination, the patient passed 700 c.c. of urine.

During the whole time the patient was under treatment, lasting from the 1st of March to the 4th of August, 1894, I catheterized her left ureter about 120 times in all. The first three weeks of her stay were passed in vain endeavors on my part to get the ureteral catheter well into the ureter. Three difficulties prevented this at first. In the first place, the irregular papillary prominences on the left side in the neighborhood of the ureteral orifices obscured it and made it impossible to locate it with certainty, after the first examination in which the pus was seen in it as stated; in the second place, the location of the orifice was unusual, lying extremely displaced to the left; in the third place, there was a spiral stricture of the intravesical portion of the ureter, and it was necessary for me to learn the twist of the stricture before I could pass the catheter at once at every sitting. I cannot say too much in praise of the tenacity and pluck of my patient throughout the first part of the treatment, which was very trying to me and more so to her, as I was entirely uncertain as to the ultimate outcome, and could give no positive assurances.

After almost daily efforts for three weeks, the stricture was finally cleared by an accidental turn of the hand; this was more readily repeated on two or three occasions subsequently, but not without discouraging failures, when the ureteral orifice was definitely located on the side of the pyramid in relation to certain papillæ and the direction of the stricture was ascertained so that the catheter could after this be passed with ease. After pushing the catheter through the stricture, it entered about 8 cm.; a distinct sense of resistance was felt in attempting to withdraw it, due to the bite of the stricture, which was about $1\frac{1}{2}$ cm. long. So long as the point of the catheter went no further than the stricture no urine escaped, but as soon as the catheter cleared the stricture pale urine began to pour out in a steady stream, continuing until 130 c.c. was collected in three minutes. Sometimes the first urine drawn off would be of a reddish-brown color, followed by a whitish sediment, and at the last a thick, creamy fluid like pure pus.

The fact that so much urine escaped in so short a time proved conclusively that the case was one of extreme dilatation of the left urinary channels above the stricture, for the normal rate of secretion is but one cubic centimetre a minute for both ureters together, or one and a half in three minutes for one ureter. The discharge of 130 c.c. would be twenty-nine times the normal amount, or at the rate of about twenty-two gallons a day for both sides together. Thus by a *reductio ad absurdum* proving that the case was a dilated pyo-ureter and pyelitis.

After drawing off all the fluid, a piece of fine rubber tubing with a funnel at the end was connected with the catheter, and a saturated boric acid solution, two-thirds of the quantity of fluid taken out, was run into the

ureter by gravity, by simply elevating the funnel filled with the fluid from 40-60 cm. above the level of the bladder. Care was taken to have the tubes full of fluid so as to inject no air. The patient, during these manipulations, was in the knee-breast position. She took no anæsthesia, as the treatment was not painful. After introducing the catheter into the ureter, she raised her body on her hands so as to make it horizontal, to better dispose the fluid to run out. When the injection was given, she again let her chest down to the table, and rose again when it was to flow out. I found that I could wash the urinary tract repeatedly with the same fluid, if I desired it, by holding the funnel high when the fluid should run in, and by holding it an equal distance below the level of the table when all the fluid would well back into it again, often bringing, too, a considerable amount of shreddy white débris from the ureter.

After the first few treatments of this kind, she began to experience relief from her pain, and was much less frequently disturbed at night.

An examination of the urine made by Dr. Barker, in the pathological laboratory of the Johns Hopkins Hospital, states that it was of a straw color, neutral in reaction, and containing an abundant muco-purulent, stringy, tenacious sediment. There was a small amount of albumen, but no sugar, and no casts. The specific gravity was 1032. There were a great many polynuclear leucocytes, crowds of pus cells, and many diplococci, nearly all of which were within the protoplasm of the leucocytes. Octahedra of calcium oxalate were found, and a few cylindroids. There were no tubercle bacilli, and no other bacteria than diplococci, which were of the typical appearance of gonococci, and much smaller than staphylococci or streptococci.

The bladder walls were treated by occasional applications of a five per cent. solution of nitrate of silver, applied directly to the affected areas on absorbent cotton with an applicator, and by daily irrigations of a bichloride solution 1-150,000.

My first effort in the treatment of the case was to secure a continuous drainage of the ureter, avoiding all accumulation above the stricture, hoping by this plan to induce a contraction of the ureteral walls. To do this I made a short ureteral catheter 2 mm. in diameter and 5 cm. long, with a little shoulder about 2 cm. back of the inner end to keep it from slipping out of the ureter after introduction, and with a flange 6 mm. in diameter at the lower end to keep it from slipping altogether into the ureter. I placed this in the ureter by means of a searcher used as a mandarin to conduct it through the stricture. I found, however, that its presence gave so much pain and increased the irritation of the bladder, after being in place for twelve hours, that I was obliged to abandon its further use, although it acted well mechanically.



My next plan, which was successful in curing the case, was to have ureteral catheters made in four sizes, increasing from the smallest, 2 mm., to the largest, which was 5 mm. in diameter. The points of the catheters were blunt and straighter than the ureteral catheters ordinarily used, on one side almost on a line with the shaft.

In the course of two months, the ureter was dilated sufficiently to permit the introduction of the largest catheter, from the end of which the accumulated urine would drop in a large free stream. With the catheters I began systematically to wash out the ureter and kidney with a bichloride of mercury solution 1-150,000, constantly increasing the strength until 1-16,000 was used. The treatment with the bichloride was interrupted several times for the injection of a one per cent. nitrate of silver solution, and once for a weak iodine solution. Towards the end, while using the larger catheters, I was obliged some six times to suspend the treatment for from two to three days on account of a chill followed by elevation of temperature from 102°-104° F. with a quickened pulse (120), headache, nausea, and pain in the left inguinal region and legs. She was flushed and restless, and suffered from sleeplessness at these times.

The result of the bichloride washings was a complete disappearance of pus cells, leucocytes, and gonococci from the urine, and the reduction of the size of the distended ureteral tract from one holding regularly from 140-150 c.c. down to 90 or 100 c.c. The bladder assumed a normal appearance, and she became able to sleep through the night without rising once. She gained 20 pounds in weight, and resumed the rosy appearance of perfect health, with a corresponding remarkable improvement in spirits.

The treatments were discontinued August 8, 1894, and I saw her again in January, 1895, and then on two occasions catheterized the ureter, drawing off only 90 and 100 c.c. of clear urine from the left ureter, without a trace of pus or cocci. She has, therefore, recovered from the infection, but still has a stricture of the ureter of larger calibre with a lax distended ureter above it.

I made several attempts to empty the ureter by massage, with considerable success at first, but the procedure became so painful that it had to be stopped. Just before the massage the bladder was emptied by catheter, and immediately after treatment as much as 90 c.c. of urine were secured.

I demonstrated the success of the massage and mapped out the exact positions in which to make pressure, by placing a catheter in the ureter with the patient in the dorsal position, with a rubber tube attached to its outer end, a straight glass tube 50 cm. long, attached at the other end of the rubber tubing, filled at once with urine to the level of the ureter and acted as a manometer. Respiratory movements were traced by its rhythmical ascent and fall. On making pressure over the ureter through the

abdominal wall, the column ascended in the vertical glass, and by increasing the pressure could be forced out over the top. If the pressure was made to one side, there was only a slight effect or none at all. By marking all the points of effective pressure on the skin, and afterwards connecting the markings, the course of the ureter was accurately mapped out.

The following novel and important points are demonstrated by this case :

(1) Stricture of the lower extremity of the ureter can be diagnosed without any operation, by using the cystoscope with the bladder dilated with air by posture.

(2) Stricture at the ureter can be improved by gradual dilatation by a series of hollow bougies (catheters) and without a kolpo-ureterotomy. (See Kelly, Johns Hopkins Gynæcological Report, No. 1.)

(3) A stricture through which a No. 5 (5 mm. diam.) bougie is passed every day for several weeks will still hold back the urine if the walls of the ureter above have lost their contractility.

(4) Pyo-ureter and hydro-ureter can be diagnosed by drawing off in a few minutes such a quantity of fluid as it is manifestly impossible for the kidney to secrete in that amount of time.

(5) Pyo-ureter and pyelitis can be cured by washing out the ureter and pelvis without any preliminary cutting operation to disclose the ureteral orifice (as in kolpo-uretero-cystotomy, Bozeman).

(6) Variations in pressure in the column of fluid in a distended ureter can be demonstrated by a manometer attached to the ureteral catheter.

(7) In this way the course of the ureter can be mapped out.—Howard A Kelly, M.D., in the *Bulletin of the Johns Hopkins Hospital*.

[NOTE.—The whole of the above paper is published on account of its very great interest. The frequency of these cases occurring in private practice, and the comparative ease with which the treatment can be carried out by the general practitioner, makes the matter of the greatest importance.]

PÆDIATRICS AND ORTHOPÆDICS

IN CHARGE OF

W. B. THISTLE, M.D., L.R.C.P. Lond.,

Assistant Demonstrator of Anatomy, University of Toronto; Physician to Victoria Hospital for Sick Children; Clinical Lecturer on Diseases of Children in the Woman's Medical College;

AND

B. E. McKENZIE, B.A., M.D.,

Lecturer on Orthopædics and on Surgical Anatomy in the Woman's Medical College, and Surgeon to the Victoria Hospital for Sick Children, Toronto.

LUMBAR PUNCTURE.

In *Berl. Klin. Woch.*, July 8, 1895, Stablemann draws attention to the importance of puncturing the spinal canal in the lumbar region for diagnostic purposes in order to ascertain the character of meningitis. The author lays stress upon the importance of the positive and unreliability of the negative evidence obtained by this procedure. In tuberculous meningitis the fluid drawn off should be clear, with tubercle bacilli in it; in suppurative meningitis turbid or purulent, with pyogenic micro-organisms in it; and in cerebral abscess clear, and without micro-organisms. Tubercle bacilli have not been found at times by some observers, although Lichtheim has never missed them. Clear fluid without micro-organisms may also exist in tumor cerebri, simple meningitis (Quinke), and even suppurative meningitis. The difficulty of distinguishing at times between cerebral abscess and meningitis is well known. If pus is drawn off by lumbar puncture, suppurative meningitis must be present.

A CASE OF SPLENIC LEUKÆMIA TREATED BY BONE MARROW, WITH RECOVERY.

In the *British Medical Journal*, 1894, ii., 1238, Lawrie Macpherson reports a case of splenic leucocythæmia treated by bone marrow, with recovery. The patient, a child of seventeen months, was in an advanced state of emaciation, and with a greatly distended abdomen. Appetite was entirely lost. Sickness and diarrhœa were constant and severe. The skin was harsh and dry, and the pallor of skin and mucous membranes was extreme. Respiration was rapid and shallow; the pulse was about

120. There was a daily rise of temperature, followed by exhausting perspirations. There was no albumen or sugar in the urine.

Abdominal examination revealed the existence of an enormously enlarged spleen, which occupied two-thirds of the cavity. The anterior edge, easily defined, was indicated by a curved line extending from the ensiform cartilage to the middle of Poupart's ligament on the left side, and passing well to the right of the umbilicus. The surface was smooth, and free from tenderness. A slight amount of fluid existed in the peritoneal cavity; there was no evidence of effusion elsewhere.

Inquiry failed to elicit any history of syphilis or malaria. A teaspoonful of bone marrow thrice daily was prescribed, with appropriate nourishment, and no other treatment.

Although the case seemed somewhat hopeless, improvement rapidly followed; appetite soon returned, sickness and diarrhoea ceased, and fever disappeared. The skin and mucous membrane assumed a healthy color, and the child put on flesh.

The most striking alteration was the steady diminution in the size of the spleen, which can now only be felt in its normal position, under the ribs. After four months' treatment the patient has been restored to health and strength.

INTRAUTERINE INFECTION WITH THE TYPHOID BACILLUS.

A case is reported (*Berl. Klin. Woch.*, June 14, 1895) where a woman in the fifth month of pregnancy aborted while suffering from an attack of typhoid fever. The accident happened in the fourth week of the disease. The foetus died soon after the cord was cut. Bacteriological examination of blood from the spleen and placental blood was commenced twenty minutes after birth. In three days colonies were developed in the tubes, giving all the distinguishing features of typhoid bacilli. Every precaution was taken to sterilize the genital passages. The number of bacilli present was small. The case shows that typhoid bacilli can pass over from the mother to the foetus. Nothing abnormal was found in the foetus except an enlarged spleen. Careful examination of the placenta and of the endometrium revealed no lesion.

TOXIC PRODUCTS OF TUBERCULOSIS.

After many experiments, Angelo Maffucci (*Il Policlinico*, January 1 1895) affirms that there exists in culture preparations of tubercle where the bacilli are dead a toxic substance which resists the action of time, heat, desiccation, sunlight, and gastric juice, and this substance is not a product of bacillary secretion, nor derived from the nutrient medium, but a poison

contained in the substance of the bacillus itself, and due to its disintegration. Maffucci found that culture preparations three years old had not lost their toxic power ; that fresh as well as old cultures submitted to the action of 65° to 100° C. for an hour or more, though this might destroy the vegetative power of the bacillus, had little or no effect on its toxic power, nor did desiccation for fourteen months destroy it. Sunlight from fifteen to forty-five days at 32° C., followed by exposure to heat, 100° C., and then treatment with gastric juice, had no effect on toxicity. This toxic substance is very active in its power, as an infinitesimal dose sufficed to cause marasmus ; moreover, it may be transmitted by tuberculous parents to the foetus without any transmission of the bacillus itself, causing abortion, or marasmus in those foetuses that are born alive ; it may also be eliminated by the milk. The action of this toxin is to cause inflammation and necrosis of the tissues ; in concentrated solutions, it causes tuberculous abscess ; diluted, it produces disturbances of the circulation, catarrhal inflammation, and alteration of the red corpuscles of the blood ; by passing repeatedly through the kidneys, it may set up a parenchymatous nephritis, or a fatty degeneration of the renal epithelium.

Editorials.

PASTEUR.

THROUGH the death of Pasteur, France has lost her most gifted son in the great field of science. The son of a journeyman tanner, born in obscurity in a small village in the Jura region, died in Paris, long after he had been acknowledged by his countrymen to be one of the greatest men the French republic has produced. He received almost every distinction that his government could give him. His memory was honored by giving his remains a national funeral, conducted with most imposing ceremonies, and attended by President Faure, the members of the diplomatic corps, Prince Nicholas of Greece, the Grand Duke Constantine of Russia, and various other representatives of foreign countries. France is one of the most progressive nations in the world as far as science is concerned, and is ever ready to give substantial assistance to those engaged in scientific researches.

Pasteur's reputation was by no means confined to his own country. It extended throughout the world of science—and far beyond it. Everybody, scientific or otherwise, has heard of him. We feel proud that our profession can produce such a man, and we feel glad that his countrymen and his government appreciated his worth so long before his death. France, in honoring her distinguished scientist, has done honor to herself. Pasteur is dead, but his work will live and grow through all time.

THE MEDICAL COLLEGES.

CANADIAN medical schools adhere to the custom of opening their sessions in a formal manner by the delivery of what is called the introductory address. Many, but not probably the majority, of the schools of Great Britain have given up the custom. The *British Medical Journal* says: "That event used to be celebrated everywhere with an efflorescence of homiletic and didactic oratory that reminded one of the eloquent harangues which ancient historians put into the mouths of generals before a battle"; but, at the same time, admits that the introductory address

forms an appropriate commencement of the medical session, and considers it a pity that it should have been allowed to fall into desuetude at some of the schools.

The opening exercises in the Toronto and Trinity schools included the usual formal addresses, which were well received by the students and their friends in attendance. The Rev. Professor Clark, of Trinity University, delivered the address for Trinity Medical College, while Professor A. McPhedran performed a similar service for the Medical Faculty of the University of Toronto. The lecture (which we hope to publish in full in our next issue) was delivered in the building of the Biological Department, and dealt especially with the facilities which were placed at the disposal of the students by the University authorities, and the duties of the students in connection therewith.

TORONTO WATER SUPPLY.

IN our March issue, 1893, we published an editorial on the water supply of Toronto, written by a physician who had very carefully studied the whole subject. As we are now, more than ever before, convinced that the views then expressed are correct, and have reason to believe that many who have given the subject much consideration agree with us, we have decided to reproduce a portion of it, as follows :

"There is a proposition before the council to lay another conduit across the bay. What are we to do? The people will not be satisfied with water carried across the bay. Tests have proved fallacious before, and may again. Even should the pipe recently relaid be now sound, the liability to another break would be great. A small leak may mean a great loss of life. We should have pure water that is not brought through a cesspool. We believe that Lake Ontario should be the source of our water supply. It appears to be Nature's gift to us."

There are, at least, two lake currents that should be taken into account in determining the place from which the supply should be taken. The present intake pipe, about one-half mile southeast of the western end of the island, is in fairly good position, although it could be moved farther west without any danger from either current. We take it for granted that some day the city will have a trunk sewer which will drain east, perhaps to a farm, but, at any rate, out of the bay. The current from the east, supposed to be caused, partially at least, by the force of the Niagara river's discharge on the opposite side of the lake, sweeps around the southern shore of the island, and meets a current from the west caused by the swirl from Mimico Point through Humber Bay at a point south of the south-

western point of the island. The current in the bay, which is only slight, is from west to east. We believe that the conduit should be entirely through pure water, so that, in the event of a break, there would be the least danger of receiving impure water. We also believe that the proper place is farther west, say, south of Garrison common, or possibly as far west as Dufferin street. The only change this would necessitate would be moving the pumping station and plant, and laying a large main from Peter street to the new site. A conduit laid there would be little or no more costly in proportion to its length than one laid across the bay, and pure water would be guaranteed. There is at present one slight objection to this scheme, but that is of very small moment indeed. There are three sewers emptying into the lake west of the Queen's wharf. They have a capacity of about three millions daily. This sewage could be conveyed to the bay by a trunk or collecting sewer, which would free that portion of the lake entirely from sewage contamination, besides inaugurating the commencement of a trunk sewer system.

DOMINION MEDICAL REGISTRATION.

IT is unfortunate that the question of medical registration for the whole Dominion is surrounded by so many difficulties. The matter has frequently been discussed at meetings of the Canadian Association, as it is naturally supposed that that is the proper body to consider the question. It was hoped that the committee of this association which was appointed at the St. John, N.B., meeting in 1894, to consider and report on the question, would be able to do something in the way of removing the difficulties which prevent a satisfactory settlement of the whole matter. In the report presented, the members of the committee "expressed their regret that, by the system which at present obtains, a graduate in medicine entitled to practise in our province is not free to exercise his functions in all the provinces in this large but sparsely settled Dominion; that this condition of things prevents the names of medical practitioners in this Dominion being placed on the British register, becoming thereby British practitioners. This latter is a boon which the council of Great Britain has more than once signified its willingness to grant. To secure these ends, it is considered most desirable that a uniform standard of medical education for the whole Dominion be established. In order to effect this purpose, it is suggested that the secretary be instructed to communicate with the various provincial councils before the next meeting, asking that each council discuss the position, and, if possible, appoint one or more delegates to a Dominion committee for the purpose of adjusting a suitable curriculum to carry out the

suggestion herein, and that such committee be requested to forward its findings to the provincial councils and to the secretary of the association before the next meeting."

This report is somewhat disappointing to those who hoped that the committee would have worked in the direction of communicating with the various provincial councils, instead of simply suggesting that something of this sort be done in the future. What we wanted to get from the committee was work, and not suggestions. We have been deluged with suggestions for some years ; we want now to get one step farther.

The Montreal Medical Journal fears that the representatives of Ontario will demand more than those of Quebec will be prepared to grant. It also suggests that reciprocity would answer the purpose for the present, and states that such reciprocity now exists between Quebec and Manitoba. If Ontario and Quebec could agree, it is likely that the other provinces would readily fall into line. We think a great deal will depend on the attitude of the Ontario Medical Council, which, in the past, has not always shown a conciliatory disposition. We have reason to think, however, that a majority of the present council are anxious for reciprocity or Dominion registration, and will gladly confer with delegates from the other provinces, and assist in finding a solution of the many opposing difficulties.

LODGE PRACTICE.

WE publish in this issue a letter on lodge practice, from three representatives of the Ontario Medical Council, and published in the *Free Press*, of London, Ontario, which will probably be read with much interest by the profession of this province. The evils connected with this class of contract practice are generally recognized by our physicians, whether they be engaged in such work or not. It has been found difficult, however, to get the profession to agree unanimously on any solution of the difficulties surrounding the whole vexed question. The physicians of London are making a very determined effort to stop lodge practice, and forty-one out of a total of forty-six medical practitioners of that city have signed an agreement which reads as follows :

"We, the undersigned medical practitioners of the city of London, severally covenant and agree each with the other, that on and after the first day of January, 1896, we will not engage in, or contract our services for, lodge or club practice.

"And we do hereby severally covenant and agree each with the other, that any party to this agreement who violates the same will subject himself to the payment of the sum of sixty dollars as liquidated and ascertained damages for such breach, and that the said sum may be sued for in the

name or names of one or more of the other parties to this agreement in the First Division Court of the County of Middlesex, the jurisdiction of which court we hereby admit and consent to, and that upon any sum being recovered in such action the same shall be applied to whatever object a majority of the parties to this agreement may decide upon.

"It is further agreed and understood that this agreement shall not be binding until it is signed by all the medical practitioners in the city of London.

"In witness whereof we have hereunto set our hands and seals this 23rd day of September, 1895.

"Signed, sealed, and delivered in presence of."

It will be noticed that this agreement will not be binding unless all the physicians of London sign it. We sincerely hope that the remaining five will be induced to co-operate. We have no desire to see the public suffer, and we hope that the sick poor will, in no case, be neglected; but we do wish to see the end of a system that is very materially lowering the tone of our profession. It is feared by some that, even if all in London agree upon this course of action, outsiders might be imported. This might happen, but such importations would be such contemptible creatures that they could scarcely hope to command the respect even of lodge members.

We understand that some are in favor of continuing the system of lodge practice, but desire to raise the fees to a paying basis. This might be right, from a strictly commercial point of view; but it would be simply a sacrifice of principle for the sake of expediency or profit, without removing these features which are mainly objectionable to the old system.

Correspondence.

DR. W. T. McARTHUR (Tor., '95) has commenced practice in Los Angeles, California. From a private letter, received September 28, we extract as follows :

I was exceedingly sorry to see in Saturday's *Globe*, 14th inst., which arrived here yesterday, an account of the death of our esteemed class-mate, Dr. A. K. Merritt. It is so sudden, I can hardly realize that such is so. In his death, I feel that we have lost the cleverest of the graduates of class '95.

It is about ten days since I arrived here. I am delighted with the city, the climate, and the people. This city is growing very fast, and will soon be far ahead of the cities which are now its superiors. The people are quiet, orderly, industrious, good-looking, etc.; in fact, I see no difference from the people of Toronto, with this exception—there is a great number of lady bicyclists here. They climb on regular racing wheels—handles low—get a hump on the back, and away they go, at what they suppose to be four miles in three and a half seconds. With such a state of affairs I meet with two difficulties, viz. :

In the first place, when I see a wheeler coming it is difficult to tell whether it is a lady or gentleman. Secondly, if a lady, it is hard for me, when she is off her wheel, to tell, without looking at her face, which is front and which is rear.

There are a great many quacks in the city, still they do not work much among the better classes. I am the only graduate of the University of Toronto here. If you ever come out this way, be sure to come to see me ; or if you have any of your friends or acquaintances coming, I shall be pleased to have them call to see me. The fall term will soon be opening, and you will be into your work again. If you have an opportunity, kindly remember me to the boys. I wish the University of Toronto every possible success, especially the medical department.

I have written a longer letter than I had intended ; however, if I have wearied you, I hope you will pardon me.

W. T. McARTHUR.

LODGE OR CLUB PRACTICE.

To the Editor of the *Free Press*, London :

DEAR SIR,—The sentiments of the medical profession in this city respecting lodge or club practice are as follows :

(1) The practice is unbusiness-like, inasmuch as the lodge doctor engages to do an indefinite amount of work for a definite limited remuneration. Whether the demands upon his services are, as in the majority of cases, out of proportion to his remuneration, or whether perchance by reason of preference some lodge members employ the family physician, regardless of their privilege of free medical attendance ; whether, in fact, the lodge doctor receives more or less than a fair remuneration for his services, is a matter governed by circumstances which his contract takes no cognizance of—a contract which, from its very nature, ignores the fundamental business principle, that every man should pay for what he gets, and get what he pays for. The violation of this principle renders contract medical practice objectionable on the very face of it, while the observance of the principle renders some forms of medical practice tolerant, even though not wholly satisfactory. For example, medical examiners are paid only from \$1 to \$2 for examinations by the societies, while insurance companies pay from \$3 to \$5 for precisely similar examinations, and yet the medical profession, while feeling the inadequacy of the former fee, have not raised any general complaint, inasmuch as the remuneration, whatever it may be, is a fixed fee paid for a definite limited service, and thus differs essentially in principle from a contract for free medical attendance.

(2) The remuneration for contract medical attendance and free medicine, viz., \$1 to \$1.50 a year per member, is grossly out of proportion to the services rendered. Taking the last medical report of the I. O. O. F. as a basis of computation, on account of its completeness, we find that out of a total membership of 21,685 there were sick, during the year 1894, 3,019 members for an average of four weeks, five days, and thirteen hours each. The sum of \$6,333 was paid lodge doctors for medical attendance and free medicine. On the reasonable basis of four visits a week to each patient, the amount paid by the order would allow for each visit the sum of a little over ten cents. In private practice the minimum fee for ordinary visits is recognized by common consent, as well as tariff schedule, as \$1 per visit, a fee the reasonableness of which has never been called in question, and one certainly not excessive when the study and skill necessary and the responsibility and anxiety incidental to the work of a physician are considered. Making due allowance for losses entailed from bad debts

in private practice, it will be seen at a glance that the fees received for contract services are many times less than that paid in ordinary practice. Why should medical men contract their services to societies at a mere fraction of the fees cheerfully paid by the general public in private practice? Is it warrantable or politic for beneficiary societies to engraft upon their organizations a relief system which is unjust to the medical profession on the one hand, and contributes to an unfair discrimination against the general public on the other hand?

(3) The medical contract feature of beneficiary societies cannot be defended on charitable grounds. The well-to-do, as frequently as the less favorably situated, seek and obtain membership in these societies with a view to securing cheap medical attendance. Business men, professional men, manufacturers, and contractors are found in their ranks and sharing their advantages. The absolutely poor do not suffer in a city like London for medical attendance. Not only have we our free hospitals and dispensary, but every medical man is in himself a centre of charity in the ordinary exercise of his professional work. It may be said truthfully, though with no desire for parade or boasting, that no class in the community have such demands made upon their charity and consideration for the poor, or respond more cheerfully to these demands, than the medical profession. We doubt not, the public have sufficient confidence in the generosity of the profession to rest assured that the poor shall not want for medical care, even though this system of contract practice, now sought as eagerly by the well-to-do as the ill-to-do, should cease.

(4) The system does not contribute to improve the tone of either the profession or those who participate in the privilege of free attendance. Some men are led to engage in it in the expectation that it will be the means of gaining access to family practice; others with limited practice avail themselves of it in order to supplement, though at great labor, their ordinary practice; while others reason that, on the principle of self-protection, they are obliged, however reluctantly, to accept contract work because others are doing it. The result is that unseemly competition, rivalry, and ill-feeling is engendered. Probably most of the little animosities and jealousies found in the medical, as well as other professions, are in its case at present traceable to this mischievous system. Further, the remuneration not being commensurate with the services required, there is a temptation to render indifferent attendance and supply inferior and cheap medicines. Again, lodge members are liable to fancy that they are being neglected and treated akin to charity patients even when they receive reasonable attention. The consequence is, the medical attendant is frequently subjected to annoying complaints on this score, complaints which his insecure tenure of office will not permit him to ignore, however unreasonable

they may be. In short, we believe the system to be subversive of the manliness and independence of the profession.

Nor is the position of the beneficiary members themselves wholly satisfactory. Here extremes exist, if they do not meet. In those of selfish tendencies, the greed to get as much as possible because there is no proportionate increase in the cost is developed and manifested in the frequency with which, on the slightest pretext, they are ever calling in the services of their doctor, and in the satisfaction with which they dispose of the most liberal supplies of medicines. Those of finer sensibilities, on the other hand, refrain from seeking as much medical counsel as they should, lest they may be suspected of taking undue advantage of their privilege of "free attendance." Again, the ramifications of the system are becoming so extensive that the confidential relations of family physician, once so sacred and honorable, are fast becoming a thing of the past. It is at the present time no unusual thing for a family to have as many different doctors as there are members in the family. Not merely male members and heads of families, but affiliated societies of women and children even, are now found in some of the orders. It is no uncommon experience for a physician who has been called in to attend a non-society member of a family to find another member in charge of a lodge doctor, a daughter or sister, belonging to a society, under the care of a second doctor, while a child in the same house may be attended by a third doctor—a physician for one of the juvenile societies! Surely human life ought to be of more consequence than to assign its ills and ailments in a job lot to the contractor who will give the cheapest service, or who has found most favor in the eyes of a majority of a lodge or club. He may be a capable man, but in the nature of things, he cannot possibly be as serviceable to the members as if they were governed by their individual judgment and preference in the choice of a medical attendant.

(5) Free medical attendance is by no means essential to the successful working of beneficiary societies. As a matter of fact, the system is not in vogue in one-half of the beneficiary orders. The three orders of Foresters, the Knights of Pythias, and the I.O.O.F. (with whom it is optional), provide medical attendance for their members. The Chosen Friends, the Ancient Order of United Workmen, the Canadian Order of Home Circles, and the Select Knights provide sick benefits, but not medical attendance. The Royal Arcanum, Woodmen, and National Union provide insurance protection only, and of course have not medical attendants. It is evident, therefore, that less than half of the beneficiary system do not approve of the system of providing free attendance; and while they provide weekly sick benefits, they allow their members to choose and employ their own medical attendants.

(6) Lastly, the profession in this city has no quarrel with beneficiary societies. We recognize that they are engaged in laudable work, and that they are promoting provident and thrifty habits among their members, as well as relieving the sick and the distressed. We do not wish to antagonize them, and we are prepared to render them every assistance in our power in actual charitable work. We do not propose to enter upon any further discussion of this subject. We trust, however, that we have put our attitude towards the system of contract practice in such a light that the societies employing lodge doctors will recognize the reasonableness of our position, and see their way clear to dispense with the system. We have been reminded that the withdrawal of the services of the profession in this city from contract practice might result in the importation of outside medical men to carry on the work. Even if such a course were practicable, even if men could be found who were prepared, in the face of the medical profession of this city, and in opposition to the sentiments of the best elements of the profession throughout the province, to come here to engage under such circumstances in contract and other practice, we doubt, indeed we question, whether such men would be found worthy of the confidence reposed in the skill and honor of reputable physicians. It may, however, be premature to refer to this aspect of the question, as the profession of this city, although of one mind in the matter, has not quite decided what course to adopt with reference to this vexatious subject. But whatever the outcome of our present consideration of the question may be, beneficiary societies and the public generally may rely upon the exercise by the medical practitioners of the city of London of a fair-minded spirit, and that if a unanimous course be decided upon that course will, in our candid judgment, be alike honorable to the profession, and consistent with the best interests of the public.

W. F. ROOME,

Territorial Representative.

W. H. MOORHOUSE,

Collegiate Representative.

CL. T. CAMPBELL,

Homœopathic Representative.

London, Sept. 30th, 1895.

Meetings of Medical Societies.

TORONTO MEDICAL SOCIETY.

THE first regular meeting of the Toronto Medical Society for the year 1895-1896 was held in the council buildings, October 10, 1895.

The president, Dr. W. H. Oldright, occupied the chair.

The minutes of the last meeting were read and adopted.

Dr. Oakley, of Dundas street, was elected as a member of the society. The following gentlemen were present: Drs. W. H. Oldright, J. N. E. Brown, W. J. Wilson, A. R. Gordon, Gilbert Gordon, Price-Brown, J. Passmore, Cook, Cameron, Peters, Primrose, Anderson, Hamilton, Harris, Cuthbertson, McPhedran, Greig, Guinane, Graham, C. J. Hastings.

The president, Dr. W. H. Oldright, delivered his address, which consisted in a graphic description of his recent tour through Europe. It referred more particularly to points of interest for medical men. He also exhibited a number of new instruments he had secured while in London. A number of very interesting photographs of points of interest were exhibited.

Mr. I. H. Cameron presented a hairpin which he had removed from the bladder of a little girl aged 5 ½ years. It was encrusted at the time of removal by a phosphatic deposit.

Dr. Oldright presented a double placenta which was delivered after the birth of one child. The cord was very large.

Dr. McPhedran related the history of a case of appendiceal abscess discharging through the lung.

The patient was a man aged 40. In January, 1895, he had an attack of colicky pain in the right side of the abdomen. In two or three days he was well, and remained so until February, when he had a second attack. This attack was very severe, from which he did not recover. Following the acute attack he was conscious of a feeling of discomfort in the right iliac region, and he had a tendency to stoop over to that side when walking. He did not notice any swelling in that region at first. In March, a tumor was noticed first. In April, he had a third attack. With this a large, solid tumor was felt. There was considerable tympanites. The

tumor grew smaller, but did not disappear entirely. The patient began to cough a great deal; the expectoration consisted of a dark purulent sputum with mucoid material with a very offensive odor. Toward the end of June he felt a soreness below the right scapula; this was followed by a tumor in this region. There was no dyspnoea. The appetite was fairly good, and the pulse regular. On June 29, he had the appearance of a man in the last stages of tuberculosis. The emaciation was extreme. It was with great difficulty that he was able to stand or walk. The swelling was soft and fluctuating. Examination of the chest gave negative results, except around this lump, where there was absence of the respiratory sounds. The abdomen was flat. On the right side, there was a moderate-sized mass, quite hard, flat on light percussion, and slightly resonant on firm percussion. The mass did not move with respiration. Pulse 110, respiration 22. Urine normal. Appendiceal abscess was diagnosed, which had perforated the bronchus, and also the eighth intercostal space. The abscess in the back was opened, and two or three ounces of stinking pus was discharged. This caused him considerable relief. Operation was advised. The mass was found to be adherent to the anterior abdominal wall. Communication was found existing between the abdominal and thoracic cavities, water passing through and emerging from the sinus in the chest wall. Patient did well for about a week, when collapse supervened.

Dr. Graham asked if the abscess had passed in front or behind the liver.

Dr. Hastings asked if this case did not prove that it was wise to operate on all cases of appendicitis, especially after the second attack.

Dr. McPhedran thought not. He believed many of the cases, even after several attacks, became quite well. The abscess passed in front of the liver.

Mr. Cameron said the case was interesting to him, as it was the third he had met inside of the year. In twenty years he had not met such a case before. He had a patient under his care lately who had seven or eight attacks of appendicitis of the catarrhal variety. It was thought prudent to remove the appendix. The appendix, on removal, was found to be quite healthy, with the exception of some slight infiltration of the muscularis mucosæ. There were no adhesions.

Book Reviews.

SURGERY TWO HUNDRED YEARS AGO. F. Tennyson Neely, Publisher, New York.

This is a neatly bound book illustrated from original copper plates. There are a dozen full-page illustrations of surgical operations and the instruments used two centuries ago. The text is clear and concise, and, on the whole, the book is a very creditable production of its class, and will be interesting to many physicians.

The advertising matter is in the interests of the Antikamnia company, and the book is, we believe, sent free by them to physicians.

HANDBOOK OF CHARITIES. By John Fisher, Secretary of the Illinois Conference of Charities. Second edition. Publishers: Charles H. Kerr & Co., Chicago, 175 Monroe street.

The object of the book is "to give such authoritative data as will enable a business man to form an intelligent opinion as to the relative value and scope of the various charitable efforts of the city and state."

The idea is a good one, and in this little book of 260 pages it has been carried out in a concise and systematic manner. Among the many special charities worthy of note is that of the Chicago Medical Mission, which is conducted under the same auspices as that of the Battle Creek Sanitarium. Besides supplying free nursing, free baths, and free laundry, there is also a free dispensary and a free sanitarium. It has also established medical missionary work on various lines, and in different parts of this and other countries. Its principal branches are at St. Helena, Cal.; Guadalajara, Mexico; and Cape Town, South Africa. J. H. Kellog, M.D., has the superintendence of the work of the Chicago Medical Mission. It would be well if sanitarium principles were more in vogue in the management of some of our institutions for the sick poor.

ANNUAL REPORT OF DEPARTMENT OF HEALTH OF CHICAGO FOR 1894. Arthur R. Reynolds, M.D., Commissioner of Health. Chicago, 1895.

The report consists of 268 pages. Besides some comprehensive and exhaustive statistical reports, it also contains some very interesting charts showing the mortality from the various diseases during the past forty-four years, with a summary of the various sanitary and epidemic memoranda for

these years. These charts show that the total death rate from all diseases is on the decrease. The death rates from the infectious diseases, with the exception of cholera infantum and pneumonia, are diminishing, while the deaths from Bright's disease, cancer, heart and nervous diseases, are on the increase.

The commissioner of health claims the death rate of Chicago (15.24 per 1000) to be the lowest of all the cities in the world of over 200,000 population. He claims also average accuracy in the death records and in the census records of the city. He states that the five lake cities, Chicago, Detroit, Milwaukee, Cleveland, and Buffalo, have an average death rate of only 15.56 in the thousand, as against about 19.88 per 1000 in the remaining eleven large cities of the United States.

He holds, with considerable truth, that the climatic conditions of the great lakes region upon health and life are worthy of more attention than they have yet received from the sanitary climatologist and demographer.

THE JOHNS HOPKINS HOSPITAL REPORTS. Vol. IV., Nos. 7, 8. Being the report in Gynæcology, III. Contents: I., Hydrosalpinx; II., Post-operation Septic Peritonitis; III., Tuberculosis of the Endometrium. By Thomas S. P. Cullen, M.B. Tor. The Johns Hopkins Press, Baltimore, Md.

The reports of the Johns Hopkins Hospital, issued regularly, are always replete with information of the most interesting and instructive nature. The surgical work done in Johns Hopkins is amongst the most advanced in the world, and very frequently leads.

Dr. Cullen (Tor., '90) has had great opportunities presented to him, and has made the most advantage of them. This report shows a great amount of work in each section. The operative work on which this report is based was done principally by Dr. Howard Kelly, the chief of the clinic, but the report is Dr. Cullen's. We notice with much pleasure the magnificent illustrations that accompany the report, and must say that we have never seen such technically correct illustrations in any work on this or kindred subjects.

It is no discredit to our publishing houses to say that it is impossible to turn out this class of lithography. Germany is the only country in the world that can do it. The Johns Hopkins Hospital should be congratulated on securing the very best illustrations for their reports. Illustrations are only useful when they are accurate and true to nature. The expense is greater, no doubt, in using these, but it simply makes the illustrations in a volume useful or useless.

These reports should be more generally found on the library shelves. The work reported is practical, and done in the most recent advancement of the medical or surgical art. The price is very reasonable, the whole volume averaging about five dollars, and the separate fasciculi about one dollar each.

THE DISEASES OF PERSONALITY. By T. W. Ribot, Professor of Comparative and Experimental Psychology in the College de France. Authorized translation. Second revised edition. Chicago: The Open Court Publishing Co., 1895.

That the works of Ribot are appreciated in this country is manifested by the number of excellent translations which have been published in America. It is not so long ago that Professor Baldwin, late of Toronto University, trans-

lated Ribot's "German Psychology of To-Day," while the Open Court Publishing Co. have authorized translations of his "Psychology of Attention," "The Diseases of the Will," and, lastly, "The Diseases of Personality."

Ribot is a strong advocate of the new psychology, *i.e.*, a psychology which repudiates metaphysics. Experimental psychology presents a wide field for future research, and it is from a more thorough and practical study of the pathological and physiological manifestations of the nervous system that we are to expect much advance in psychological lore. For purposes of analysis of the human personality, Ribot has made a division into the organic, affective, and intellectual conditions of personality.

Among the organic disorders he discusses slight variations of the personality in the normal state, cases of double personality, personality of doubles, monsters, and the personality of twins. Among the affective disorders he discusses depressions and exaltations of the personality, their alteration in circular insanity, complete metamorphosis of the personality, sexual characters, eunuchs, hermaphrodites, opposite sexuality, total transformation of the character, etc. * In disorders of the intellect he discusses the alterations proceeding from paræsthesia and dysæsthesia, alterations proceeding from hallucinations, cerebral dualism, and double personality, the role of memory, and the role of ideas. In another chapter on the dissolution of personality the changes of personality in progressive dementia are discussed.

The medical practitioner interested in psychology will peruse with interest this excellent translation of one of Ribot's latest works.

The following books and pamphlets have been received :

KING'S MANUAL OF OBSTETRICS. New (6th) edition. A Manual of Obstetrics. By A. F. A. King, M.D., Professor of Obstetrics and Diseases of Women in the Medical Department of the Columbian University, Washington, D.C., and in the University of Vermont, etc. In one 12mo. volume of 532 pages, with 221 illustrations. Cloth, \$2.50. Lea Brothers & Co., Publishers, Philadelphia, 1895.

THE PATHOLOGY AND SURGICAL TREATMENT OF TUMORS. By Nicholas Senn, M.D., Ph.D., LL.D., Professor of Practice of Surgery and Clinical Surgery, Rush Medical College ; Professor of Surgery, Chicago Polyclinic ; Attending Surgeon to Presbyterian Hospital, etc., etc. Illustrated by 575 engravings, including full-page colored plates. Subscription, only \$6, cloth ; \$7, half morocco. Philadelphia : W. B. Saunders.

Medical Items.

DR. A. B. ATHERTON has removed from Toronto to Fredericton, N.B.

DR. JAMES G. CAVEN (Tor., '95) has located at 35 Carlton street, Toronto.

A PENSION of £1,000 a year has been granted to the widow of the late Professor Huxley.

DR. J. T. FOTHERINGHAM, formerly living on Yonge street, Toronto, has removed to 39 Carlton street.

THE second annual meeting of the American Academy of Railway Surgeons was held in the Banquet Hall of the Auditorium Hotel, Chicago, September 25, 26, and 27.

LECTURES IN LONDON, ENGLAND.—Dr. Bradbury will deliver the Bradshaw lecture; Sir Dyce Duckworth, the Lumleian; Dr. Mason, the Gulstonian; and Dr. Oliver, the Croonian.

THE nineteenth annual meeting of the American Dermatological Association was held at the Windsor Hotel, Montreal, September 17, 18, and 19, under the presidency of Dr. S. Sherwell, Brooklyn.

DR. J. H. SHOULDICE (Tor., '93), of Hamilton, was married in Chicago, Tuesday, October 8th, to Miss O. L. Mullin. He has removed from Hamilton, with the intention of practising in St. Louis, Mo.

AT a recent meeting of the trustees of Jefferson Medical College, Philadelphia, the honorary degree of LL.D. was conferred on Dr. John Collins Warren, Professor of Surgery in Harvard University.

PROFESSOR HUXLEY.—The following lines have been engraved on the tomb of the late Professor Huxley in compliance with his request: "And if there be no meeting past the grave, If all in darkness, silence, yet 'tis rest. Be not afraid, ye waiting hearts that weep, For God still giveth His beloved sleep. And if an endless sleep, He wills so best."

ON September 25th, at the residence of Mrs. A. Frazer, Shakespeare, Ont., her daughter, Miss Jean Frazer, was united in marriage to Dr. S. T. Rutherford, of Listowel, Ont. Miss Watson, of Toronto, a college friend of the bride, performed the services of bridesmaid, while the groom was supported by his old college chum, Dr. J. L. Turnbull, of Clinton. The newly wedded couple left in the evening for an extended trip *via* Buffalo, Albany, and down the Hudson to New York, and other eastern points.

IN an illustrated American paper of August 17th a paragraph is published in which it is urged that a rumor which has circulated "all over the

world" to the effect that Prince Edward of York is both deaf and dumb should, if untrue, be promptly contradicted, as tending to give unnecessary pain to his parents and the rest of the royal family. We are glad to be able to state authoritatively that there is absolutely no truth in the report in question. Indeed, we have excellent reasons for knowing that Prince Edward of York is in every respect a very fine child, that he displays remarkable intelligence for his age, and that he can already repeat a number of words. Do our go-ahead American cousins expect a child nowadays to speak as soon as he (or she) is born?—*Lancet*, September 7, 1895.

TORONTO UNIVERSITY SENATE.—Following are the official returns of the figures in the recent University Senate election :

Arts.—Total number of votes polled, 1,212. Hon. W. R. Meredith, 1,015 ; Prof. Baker, 919 ; Hon. A. R. Dickey, 862 ; A. B. Aylesworth, M.A., 818 ; Hon. W. G. Falconbridge, 785 ; J. H. Coyne, B.A., 768 ; Wm. Dale, M.A., 763 ; Prof. Hutton, 681 ; W. H. Ballard, M.A., 600 ; Wm. Houston, M.A., 591 ; Dr. Ellis, 580 ; J. King, M.A., 563 ; Rev. J. Somerville, 532 ; W. Barwick, M.A., 488 ; Dr. J. Ferguson, 487 ; W. F. Walker, M.A., 442 ; A. MacMurchy, M.A., 435 ; L. E. Embree, M.A., 430 ; W. B. Northrup, M.A., 374 ; G. Ross, B.A., 231 ; C. Elliott, B.A., 221 ; C. J. Roche, M.A., 113. The first twelve named are elected.

Law.—Number of votes polled, 200. J. M. Clark, M.A., 112 ; W. R. Riddell, B.A., 98 ; Hon. W. P. R. Street, 83 ; A. H. Marsh, M.A., 66. The first two named are elected.

Medicine.—Total number of votes polled, 616. Dr. J. E. Craham, 462 ; Dr. A. H. Wright, 454 ; Dr. L. McFarlane, 405 ; Dr. I. H. Cameron, 377 ; Dr. W. H. B. Aikins, 361. The first four named are elected.

Victoria University Arts Representation.—Total number of votes polled, 257. Prof. Reynar, 204 ; Dr. J. J. Maclaren, 192 ; Rev. Dr. Carman, 174 ; H. Hough, M.A., 160 ; Rev. Dr. Burns, 150 ; C. C. James, M.A., 116 ; C. A. Masten, M.A., 70 ; J. W. St. John, M.A., 69 ; J. R. L. Starr, B.A., 67. The first five named are elected.

High School Teachers' Representation.—Total number of votes polled, 309. Mr. J. Henderson, 205 ; Mr. A. Steele, 180 ; Mr. Fessenden, 152 ; Mr. Spotton, 19 ; Mr. Dale, 3 ; Mr. Embree and Mr. MacMurchy, 2 each ; Prof. Baker, Prof. Reynar, Mr. C. Elliott, and Mr. Strang, 1 each. The first two named are elected.

PROPOSED MEMORIAL TO PROFESSOR HUXLEY.—It has been decided to establish, in connection with the Charing Cross Hospital Medical School, a permanent memorial to one of its most distinguished students, the late Professor Huxley. To this end the following committee has been formed : Sir Joseph Fayrer, K.C.S.I., F.R.S., Sir Guyer Hunter, K.C.M.G. (both old friends and fellow students of Professor Huxley at the Charing Cross Hospital) ; Dr. Watt Black (honorary treasurer), Mr. J. H. Morgan, Mr. Stanley Boyd, Dr. Montague Murray, and Mr. H. F. Waterhouse (honorary secretary). It is proposed that the memorial shall take the form of an annual lecture and a science scholarship and medal. A meeting to consider the matter will be held at the school on

Tuesday, July 16th, at 3 p.m., under the chairmanship of Sir Joseph Fayrer. Subscriptions will be received by Dr. Watt Black at the Charing Cross Hospital Medical School. Sir W. H. Flower, writing to the *Times*, says: "In the great hall of our Natural Museum of Natural History the noble statue of Darwin will hand down to posterity the image of the man as he appeared to all who knew him in life. Near this will soon be placed another statue remarkable for the accuracy with which the striking personalty of Owen is represented, as all can testify. Surely this group of the great naturalists of this country and this century must be completed by the one we have just lost, in some respects the greatest of the three. The statues of Pitt and Fox stand side by side in Westminster Abbey. Huxley and Owen, often divided in their lives, would here come together after death in the most appropriate place, and amid the most appropriate surroundings. I should have waited before venturing to launch such a suggestion in public until it had been considered by a properly chosen and representative committee, but that I see other memorial projects have already been widely circulated."—*British Medical Journal*.

THE GENERAL PRACTITIONER.

He must not walk his rounds, for fear his patients think him poor,
And dearly do they love to see a carriage at their door ;
And if his horse is fat, "He must have little work to do ;"
And if it's lean, the reason is, "He starves the poor old screw."

Should he call upon his patients every day when they are ill,
His motive plainly is, "To make a great big doctor's bill ;"
If he visits them less frequently—thus lessening their expense—
The chances are he'll be accused of wilful negligence.

He must work all day and half the night, and never say he's tired,
For the public look upon him simply as a servant hired ;
And should he take a holiday, he'll find when he comes back
Some patients have resented it by giving him "the sack."

Concerning money, he must seem indifferent to be,
And folks will think he practises for pure philanthropy ;
When we hear about him boasting of the guineas that he earns,
We wonder if they all appear in his income tax returns.

About his own afflictions he must never say a word,
The notion of a doctor being ill is so absurd ;
And when, perhaps, from overwork, he's laid upon the shelf.
His sympathizing patients say, "Physician, heal thyself."

—*J. Johnston, M.D., in Lancet.*

OBITUARY.

PROFESSOR DE SURY.—The Swiss school has just lost one of its most distinguished representatives in Dr. Ernest de Sury, Extraordinary Professor of Legal Medicine in the University of Bâle.

DR. JOHN SYER BRISTOWE, one of the physicians of St. Thomas' Hospital, London, for many years, and author of a "Treatise on the Theory and Prac-

tice of Medicine," and a work on "Diseases of the Nervous System," died in Monmouth, England, August 20.

CHARLES ALLEN ORR, M.B.—The class of 1865 in the University of Toronto has lost another member by the death of Dr. C. A. Orr, who recently died from phthisis. He had been in poor health for some time, but it was hoped, last fall, that he would soon regain his strength. He got worse, however, during the winter, and, on the advice of his physicians, went out to California. He was a good and faithful student, and, as a consequence, the authorities of the University had no hesitation in granting him an ægrotal degree when he was unable to write at the final examination.

PROFESSOR LOUIS PASTEUR.—The father of bacteriology, Pasteur, died September 27, at the age of 73. He graduated in medicine in 1847. The following year he was appointed a professor of physics in the college at Dijon, and three months later was called to the University of Strasburg, where he was appointed professor of physics in the Faculty of Sciences. In 1854, he accomplished the organization of the newly-formed Faculty of Sciences at Lille, and three years afterward he returned to Paris and assumed the "direction of the scientific studies" at the École Normale.

In 1865 he was made a professor of geology, physics, and chemistry at the École des Beaux Arts, and, in 1867, professor of chemistry at the Sorbonne, and he remained here until 1875. He was elected a member of the Academy of Sciences in 1862, and six years later the Faculty of Medicine at Bonn gave him the title of Doctor, but he returned the diploma on account of the Franco-German war. In 1869 he was made a foreign member of the Royal Society of London, and in 1881 a member of the French Academy. The University of Oxford conferred on him the title of Doctor of Sciences. Since 1886 he had conducted the Pasteur Institute in Paris.

Among Pasteur's earliest discoveries was that a micro-organism caused the fermentation of impure tartrate of lime. He then went on and showed that lactic, butyric, acetic, and other fermentations are due to organisms. The result was important practical suggestions in regard to making vinegar and preserving wine, and Pasteur was able to demonstrate the errors made in those experiments which seemed to indicate the possibility of spontaneous generation. In 1865 he made a study of the diseases that had injured the silk industry of France, and pointed out the precautions to be taken to prevent the infection of the worms. The organisms that affect the beer industry were next studied, and later came researches as to the bacilli that cause fowl cholera and diseases of cows and sheep, the result of which was to prove that animals which had been vaccinated with the attenuated bacilli were protected from evil results when exposed to the virulent poison.

Between 1880 and 1886 Pasteur achieved his greatest triumph by demonstrating a method of treating hydrophobia in man similar in principle to that which he had employed in the case of diseases affecting fowls and sheep although he was never able to discover the specific microbe of rabies. His successful experiments for preventing an outbreak of the disease in the case of persons exposed are more or less familiar to the public.

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EDITOR:

ADAM H. WRIGHT, B.A., M.D. Tor.

ASSOCIATE EDITORS:

JAMES F. W. ROSS, M.D. Tor.

JOHN CAVEN, B.A., M.D. Tor.

EDMUND E. KING, M.D. Tor.

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Original Communications.

UNIVERSITY FACILITIES: STUDENT DUTY.*

By A. McPHERDAN, M.B.,

Associate Professor of Medicine and Clinical Medicine, Toronto University.

IT is with much reluctance and misgiving that I appear before you to-night as the representative of the University and Faculty. However, in obedience to their behests I am here, in the first place, to welcome the students who return to us as well as those who appear in our halls for the first time. And in the second place, in the name of the Faculty, to offer some words of counsel to you.

By many such occasions as this are looked upon as a useless formality that might be dispensed with without disadvantage or loss. For this evening at least I am inclined to believe this is quite true. It will be conceded, however, that by such occasions as this the opportunity is given to make formal pronouncements on certain questions bearing on medical education,

* Address at the opening of the Medical Department of the University of Toronto.

or questions of general interest relating to medicine, and, at the same time, to impart words of advice and encouragement to students in the difficulties and trials that beset their path. It is not my purpose to occupy your time to-night discussing any question of medical politics, but to draw your attention to the advantageous circumstances under which it has fallen to your lot to pursue your course of study and preparation, and to offer some suggestions as to the best means to reach the end you have in view. I have no doubt you have all given full consideration to the subject before coming to a decision on your present course. That you may enter intelligently on your choice of a career it is important that you understand its nature and the demands that it will probably make upon you. For a full and lucid exposition of the present status and of the future prospects of medical science and practice, I commend to your careful study the opening lecture delivered two years ago by Prof. A. B. Macallum. It will well repay each of you to give careful consideration to the questions therein discussed, as thereby you will be enabled to form a clearer and more comprehensive conception of the scope of the science of medicine, the great advances being made, and yet to be made, in it, and the directions in which new discoveries and advances are likely to occur. It will give you a clearer idea also of the requirements necessary to equip you to bear an honorable part in those advances and the requirements equally necessary for your preparation for the discharge of the more prosaic duties that will devolve upon you in the career which you have chosen. It is of the greatest importance the ideal you form of your profession—its standing, its needs, the demands it makes on you, and the spirit in which you should meet these demands. This is all of the utmost consequence because your true success—success measured by results accomplished—will be in proportion to your ideal.

After some references to the provisions made for such a scientific course, my remarks to-night will pertain chiefly to the spirit in which you should apply yourselves to your work, to incite you to the contemplation of high ideals, and encourage you in the arduous task of their accomplishment.

THE UNIVERSITY AND ITS EQUIPMENT.

Then, first, let me direct your attention to the advantageous circumstances under which you are to pursue your careers as students, and congratulate you on your choice of an institution in which to enroll yourselves. The University of Toronto has always been foremost in elevating the standard of education and in improving the facilities for instruction. For many years there has been no important reform in medical education in this province that has not had its origin in this university. It is to this advanced university spirit that you owe the splendid series of laboratories

in which it will be your privilege to pursue your practical work in the various departments. These laboratories have been the admiration of all visitors, even those from the greatest universities on both this continent and in Europe. This year the new chemical laboratory has been added—a laboratory of the amplest accommodation and most liberal appointments. Professor Pike is to be most heartily congratulated on such a complete fulfilment of his wishes in this laboratory, for which he has so long labored and waited. I regret that he could not be prevailed on to deliver the opening address on this occasion ; it would not only have been appropriate at the inauguration of his new laboratory, but would have afforded the opportunity for discussing the increasing importance of chemistry in its relation to medical science. Extensive and well-equipped as these laboratories are, there is nothing superfluous about them ; anything less would cripple their usefulness. Were funds in hand, the university authorities would have no difficulty in using it judiciously in increasing the efficiency of the present laboratories, and in adding to their number. It requires but a cursory examination to convince any one that such facilities are possible only to a largely endowed institution—no private corporation could make such provision for the training of students in medicine or other scientific course. No such provision exists anywhere in America apart from large universities, and nowhere else in Canada are such facilities to be found. The natural outcome of extensive laboratory facilities is the development and increase of laboratory teaching and demonstration on an equivalent scale—the one keeps pace with the other invariably.

THE CURRICULUM.

In regard to the question of the course required by the university, it is important that you view it in a proper spirit. Students too often cultivate, unconsciously perhaps, a spirit of antagonism to these requirements, especially if they extend beyond those usually demanded elsewhere. They feel as if these requirements were largely useless, and imposed on them to please those placed over them in these matters. The feeling is often one of resentment, as if the work prescribed were a measure of punishment, and therefore unjust. They forget that for every demand made of them the university makes provision by which to prepare them to meet these demands. It is not only a demand on the student that he shall learn a certain amount, but also on the university as well that she shall provide instruction in that work ; so that every requirement means, first, a demand on the university to provide the increased facilities, and only after that that the student shall make use of these facilities for his own development. It is a question of profit and loss—profit for the student and loss for the university. Viewed in this light, every advance in the curriculum means

a gain to the student of so much more training, and should be received by him with approbation rather than criticism.

With the exception of the Johns Hopkins University, no other institution on this continent affords her undergraduates in medicine so extensive a course of training as does the University of Toronto. In no department is her course less complete than in the most advanced institutions, while in some of the subjects, as biology, it is much more advanced. Few institutions afford any instruction in biology and embryology ; with the exception of Queen's University no other in Canada does so.

Here I would like to give public expression to my high appreciation of the science course given in this university. Among our best graduates are always to be found those students who have taken an honor science course. All these students stand high ; the four years' course in honor science work forms an excellent foundation on which to build a course in practical medicine. In speaking so highly of the scientific, I do not wish to be understood as undervaluing literary training for the student in medicine ; if the whole truth must be told, no class of students stand in greater need of more liberal literary training. All knowledge is useful to the physician, as to other people, in making him not only a better physician, but a more capable man. But the course in science has a direct bearing on the education in medicine—is an integral part of it, in fact. It trains the powers of observation and interpretation of natural phenomena. By having a thorough knowledge of the development, the structure of organs, and the physical laws by which they perform their functions, the physician is much the better able to understand diseases of these organs and the derangement of their functions. No physician can be thoroughly qualified for the performance of his duties with that power of appreciation of the demands that are made upon him if he has not had considerable training in those subjects, such as all the undergraduates in medicine in this university get in their first and second years. The course of the honor science graduate, being more full and complete, gives him greater power to advance in the science of medicine and its practical application, not only in his undergraduate course, but, what is of more importance, in his post-graduate work as well.

I may seem to you to have dwelt at rather great length on the advantages placed at your disposal, and the superior facilities provided for your instruction. My reasons for occupying so much time with this matter are, first, to make you duly sensible of your very great privileges, that you may make use of them with the greater zeal and enthusiasm—an enthusiasm bred of the conviction that your privileges are equalled by few and excelled by none, and that will stimulate you to your best endeavors, if your motives are high and honorable, and not sordid and selfish ; and, in

the second place, with a view of nurturing in you, as well as ourselves and all her graduates, that ardent attachment to our university which all her sons should cherish. I would have you leave her halls imbued with a high spirit of loyalty—a loyalty based on the knowledge of her superiority, as well as on the strongest sentiments of attachment to her as your *alma mater*. As Canadians, we would be the better of a louder proclamation of our loyalty to our university, as well as to our country. I do not mean to impugn our loyalty to our country, but I sometimes think that our university would be strengthened and her usefulness increased by a more ardent love on the part of her sons—a loyalty at least equal to her merits. I think this is true, especially of the medical graduates ; but it is gratifying to feel, as I do, that the sentiments of attachment among recent graduates in medicine are much stronger and growing in strength every year. I do not think the zeal of any graduates is greater for the interests of the university than that of the graduates in medicine in recent years.

EIGHT MONTHS' COURSE.

On account of the great and growing amount of work in each year of the medical course, and with a view to increase the efficiency of the course and, at the same time, somewhat relieve the burden laid at present upon the students, the faculty have been discussing for some time the desirability of lengthening the session to eight months. At the last session of the Medical Council, we laid the matter before that body, and asked to have it adopted, and we hope the change will be made next year. There would be no increase in the number of lectures over that now required in the six months' session. It will at once be seen that there would be much more time for recreation and private study. At present the time-table calls for about eight hours per day attendance on lectures and demonstrations in each year—that is, from 9 in the morning till 5 or 6 in the evening, with an hour's respite at noon. With anything like proper application during so many hours, the strongest student will be so fagged as to be in but poor condition for the reading that has to be done in the evening before retiring to rest. Then there is no regular time at the students' disposal for proper recreation, without which the health of the most robust must, and does, suffer, as proved by the wan faces and exhausted mien of all the conscientious workers of every class when the time for the spring examinations arrives. The want of proper regular recreation, together with long hours of study in badly-ventilated rooms, does more to injure the health of students than even the hard work they have to do. The lengthening of the session should enable us to remedy these defects in a large measure, and make the course much more efficient.

STUDENT DUTY.

Thus far I have spoken only of the university side of my subject ; let me now offer you some words of counsel and encouragement for the work which lies before you. It is proper to remind you that the course of study on which you have entered does not, at least should not, terminate with your graduation. Graduation is but the portal to more advanced study, combined with practical work. Your undergraduate course is the preparation for the duties of the physician—duties that combine the practical life with close, unremitting study, not of books only, but of actual phenomena in health and disease, as well as of that broader field of general knowledge which is the common heritage of all. The days of your pupilage here are the preparation for the graver problems which will daily confront you in the more arduous studentship of your post-graduate career. This is the view of your life work I would have you cherish. It is not the view, unfortunately, that the majority of students have ; too many of them look upon the graduation as the goal, imagining that then they have learnt all, that nothing is left but to apply their knowledge, and so they fall behind in the race, becoming reduced to the rank of routine practitioners. Even were it possible to learn all that is known of medical science up to the time of graduation, the necessity for subsequent study would be none the less because of the daily advances that are being made in all branches of medicine. I know you all acquiesce in these statements, and I make them not to overwhelm you with the magnitude of the undertaking on which you have entered, but to encourage and stimulate you to lay deep and well now the foundations on which to build your life's superstructure, and to assure you of success if the means placed at your service are wisely used. In view of the magnitude of the work that lies before you, it is of the greatest importance that you form the habits of work that will most conduce to your success, now as students, and then as student physicians. Man is the incarnation of idleness. We love to take our ease, and this love urges us to procrastinate present duty—to-morrow is ever full of golden deeds. It is only by a constant moral struggle that we can keep ourselves at work as we should, and forego the ease and pleasure that are so agreeable to our feelings. There are exceptions to this rule, but not many—we wish we belonged to them. To prepare for a life of diligence, we must form those habits that will compel us always to do the duty that lies before us. Habit becomes second nature, and we need to make it the strongest nature in order that it may overcome the dilatoriness of the first nature. Such discipline requires much self-denial, but it is comforting to remember that it grows easier with practice.

First amongst these habits I would place the power of *mental detachment*. By that I mean the ability to detach the thoughts from everything

outside of the matter under consideration. To put the same in a positive way, so far as work is concerned, it means the concentration of the mind on any subject engaging the attention. Such concentration means unconsciousness of all else than the subject of consideration. A mind so controlled might be compared to a search-light. In such a light none of the rays are lost, but all are turned on the object of search. So it is with the mind under complete control, none of its power is dissipated on extraneous subjects, but its full power is turned on the subject of investigation. The most successful students I have ever known have been those with such control over their intellects. I remember a brilliant one who could read Gray's Anatomy, for example, amidst the conversation of four or five people as if he were alone ; he was quite unconscious of their presence so long as he wanted to read. It is of the utmost importance to acquire this power—all can do it. Intellects vary in power as much as lights do, but whether you possess mental power comparable to the light of thousands of candle-power, or only feeble as a rush-light, the same necessity is laid upon you to control your minds so as to be able to concentrate them on whatsoever subject you please. The most giant intellect cannot do justice to his powers without such control, and on the feeble mind is the necessity more urgently laid. Not only in the prosecution of your studies will you find mental detachment essential to the highest success, but in the active pursuit of your professional career, as well as in the social amenities of daily life, it will be equally conducive to success and pleasure. The want of interest so common in ordinary conversation is usually due to the wandering of the mind. Few people are able to control their minds sufficiently to make them interesting listeners ; their eyes as well as their minds wander, and you cannot help wishing their personalities would go also, and relieve you of the necessity of trying to amuse or edify them. A few days ago, in speaking of a mutual friend, a lady said to me that "he always seemed, when talking with you, to be wholly interested in you and your conversation, and cared for no one else in the world. I know," she said, "it is only his way, but it is very pleasant to meet such a one." People love sympathy, and the more attentive you are to their remarks the more you enter into the spirit of their feelings, and the more they become attracted to you. You can easily see how potent this would render your influence as a physician—potent in your influence for good, and, if you wish to put it on a lower level, potent for your own material success.

In order to possess this faculty well developed it must be practised constantly ; the mind must be always kept in hand, so to speak, and attention compelled where you will, even to listening to the stupidest lecture, the dullest sermon, or the most uninteresting page of reading. Anything less than this means the crippling of the power of mental control.

To practise such mental detachment means hard work—it means that all work shall be hard because all shall be done with active concentration of mind. But it means also successful work—successful to the fullest capacity of the individual mind. Not only so, but the accomplishing of the greatest amount of work in the given time. Nothing will economize time so well. Work done with such concentration of thought would seldom, if ever, be forgotten. Have any of you forgotten the incidents of your lives that wholly engrossed your minds—even the little things, whether of pleasure, of fear, or of shame? Could we work with such mental concentration, how rapid would be our growth in knowledge! Repetition is the essence of success in teaching; then it would be repetition, with added facts only, that would be needed. With proper regulation, of the time for sleep and recreation, such systematic occupation of the mind is the surest safeguard against pessimism. The duties of the present would so engage the faculties that there would not be opportunity to unduly magnify the difficulties of the future. Carlyle has somewhere said that “your business is not to *see* what lies dimly at a distance, but to *do* what lies clearly at hand.” To *do* what lies clearly at hand—that is the lesson that all of you as students stand in greatest need to learn. So many read and work in such a distracted fashion that they grasp but little, and, in the medley of their thinking, soon lose that little. I deem this power of mental detachment of such vital importance that I urge you to practise it in all your work of the lecture room, the clinic, the laboratory, and, your study—it will enable you to accomplish more than you ever conceived possible even in your most extravagant moods; carry it with you into the examination hall, and it will banish all nervousness, because it will enable you to become oblivious of the examiner and the ordeal in the mental concentration on the subject; carry it with you into your recreation hours, and you will be the happier in forgetting the future in “doing what lies clearly at hand”; carry it with you into your social life, and you will enjoy the full measure of enjoyment that friends have to impart, while, to the extent of your power, adding to their happiness.

As students, as physicians, as men of the world, or whatever you be, to your mental detachment add the *methodical habit*. Your lecture and laboratory work is arranged for you; regulate your reading hours as carefully—each hour its own work. This will beget in you the *methodical habit*, that, with care, will never forsake you, even in the irregular and incessant demands that will in due time be made upon you as busy physicians. The public can be trained to respect your habits of regularity; see to it that you make them so regard your time for work as well as sleep that only the direst necessity would impel them to trespass upon them. This may be ideal, but not until physicians do this will they prepare themselves for the proper discharge of their duty.

But the *methodical habit* extends further and to more important ends—it extends to careful and systematic observation as applied to the daily round of work. The origin and growth of all the sciences have been due to the concentration of the mind in methodical observation. This is true of biology, chemistry, physics, botany, and, in fact, of all the sciences; it is no less true of medical science. It is often charged that medicine has not reached the status of a science. This, in a sense, is true; it is rather a system of sciences and their application to a particular purpose. As none of the sciences on which medicine rests are complete, but are daily making giant strides in advance, as, for example, physiology and chemistry, it should be no opprobrium to medicine to say it is not exact. The difficulties to be overcome before making it exact are infinitely greater than are those to be overcome in making any of the natural sciences exact. Medical science has to do with man in health and disease. The subject is an ever-varying one, shifting as the sands by the seashore—yea, as unstable as water. In the management of him principles have but a general application; in the details each is “a law unto himself.” By patient study and careful observation medicine has attained its present advanced position, but much remains to be done—more than the most learned has any conception of. The further advance must be made as the past progress has been—by collecting fact upon fact, here a little and there a little. Accurate observation becomes, therefore, the foundation on which all further progress must be made. The power to observe accurately is one that almost every one thinks he possesses. Few things annoy people more than to question their report of what they have seen, yet scarcely any two see alike. The faculty of accurate observation is seldom found except as the result of special training. What ordinarily passes for observation is a combination of observation and assumption, the latter often predominating. Too often we see a little and take the rest for granted. This is the reason that medical opinions so often differ.

Accurate observation implies mental detachment, and this, in turn, implies an unbiased mind. This is the mental habit we would have you cultivate. As teachers appreciating the best means for you to reach the goal of true success, we wish your minds to take an active part in the work of their own development. We do not wish you to sit at your teachers' feet and be docile recipients of dogma and precept without reason, however eminent the authority; rather, we invite you from the first to use your own eyes, your own hands, your own ears, and your own powers of criticism and judgment. Our aim is to see you not only learned physicians, but self-reliant, capable men, “ready to give a reason for the faith that is in you,” and men on whom others may rely with confidence. The value of experience consists not in observing *much*, but in observing *wisely*. One

case of any disease thoroughly mastered may do more to train your powers of observation than the freedom of the largest clinic. Sir William Jenner has said that "there are men who have had a great deal of practice and are still very inexperienced." There are men, especially amongst those who have been early placed in charge of large numbers of patients, who because they have treated many people, and comparatively few of their patients have died, are satisfied with their imperfect knowledge. In truth, such men mistake self-deception for experience.

In this connection I beg to warn you against what may be called the "besetting sin" of the student—at least *one* of the besetting sins—that is of saying "*yes*" when they should say "*no*"—to say they see a thing, they hear a thing, they feel a thing, or understand a thing, when they do not. "You are *not* guilty because you are ignorant; but you *are* guilty when you resign yourselves to ignorance" (Mazzini). Be such ardent seekers after truth, so concentrating the search-light of your mind on the effort, that the idea of shame for ignorance cannot occur to you.

To the qualities of mental detachment and the methodical habit, all that needs to be added is the habit of thoroughness to make you successful students. It seems almost unnecessary to add this, because one could scarcely practise mental detachment without being thorough. It is a matter of such vital importance to the student, however, that it can scarcely be pressed on your attention with too great urgency. Want of thoroughness in reading, listening, and observing in students, is pressed on our attention with sad monotony. How often students misquote what they hear or read! There is a sad waste of energy due to the lack of power to work with concentration of mind and of method. It was by the practise of these qualities that all the great epoch-making men have risen to fame. It was so with Hunter, in his discovery of circulation; with Simpson, in the introduction of chloroform; with Lister, in the creation of aseptic surgery; with that famous scientist who has just died, Pasteur; with Koch—all geniuses because all thorough workers. In a recent article a writer says "that the tragedy of to-day is not the tragedy of the criminal, but of the incompetent; not of the absolutely incompetent, but of the relatively incompetent. It is the tragedy of the man who has the best intentions and the best character, and a fair equipment for his work, but who has not a thorough equipment, and who cannot do the thing he starts to do in the best possible way. Society is crowded with half-equipped workers, with men and women who are honest and earnest, and not incapable, but who are not up to the level of the very best work."

This is as true of the profession of medicine as of any walk in life, and, I may say, especially true of Canadian medicine, in which we pride ourselves that all are well equipped—but only the few are thoroughly

equipped. The great lesson to be pressed on you and all seeking admission to this or any other profession to day is the need of absolute competency, of ultimate superiority. Let your aim be to attain that superiority.

While these faculties of which I have spoken are of the greatest importance to your undergraduate career, your years of minority, they will be even of greater moment to you when you have attained your majority. Just as the knowledge you acquire in the days of your pupilage here prepare you for the ordeal of graduation, so the training of these faculties of mental detachment, method, and thoroughness prepare you to bear your part in the more grave and onerous duties of an active professional career. Learn to look upon your graduation, not as the completion of your education, as too many do, but as the badge of qualification for freedom to direct your own work, as the portal to a wider field in which to labour. Your undergraduate training will have fallen far short of its proper aim if it has not taught you the power to mine for yourselves; if it has not excited your hunger, and so make you the stronger to hunt and till for your own subsistence. We hear much of late years of post-graduate courses; they had their birth in the insufficient training of the great majority of American medical schools, many of which are now vastly improved. This is a case in which good has come out of evil; the post-graduate course has been productive of great benefit to medical science, and will be more so in the future. I would have you, however, enlarge your idea of a post-graduate course; it should continue so long as you are an active member of the profession. Like all other sciences, medicine is daily advancing, often with great rapidity; therefore, the maintenance of a position of excellence in it, or, in fact, in any part of it, can only be accomplished by continuous labor; there can be no cessation. You must either grow with the growing knowledge, or fall behind in the race and become relegated to an obsolete past. It is said that the life of a medical book is three years, after which it needs rewriting to bring it up to the times. Like our books, we, too, need revision, not every three years, but constantly, to keep us abreast of the advance in medical science.

You all should endeavor to take post-graduate courses as soon as you graduate; let nothing short of insurmountable difficulties prevent your doing so. The benefits of such a course may be very great—will be, if pursued with judgment. Many who go spend most of their time preparing for examinations for qualifications which, with few exceptions, certainly do no credit to the degree they carry with them. I may venture the assertion without fear of successful contradiction, and I hope you will all re-echo my sentiment, that there is no qualification on this continent and none in Great Britain, except the highest ones, that will do honor to the standing of one holding the M.B. of the University of Toronto. In your post-gradu-

ate course you should have two objects in view: First, to increase your scientific attainments, that is, your knowledge of facts and your knowledge of methods of work, that you may be the more capable of continuing your work throughout your subsequent professional career; and, secondly, to increase your knowledge of people. Both of these objects will increase your wisdom and your confidence in your own powers. Even in the light of material prosperity, you could not take a wiser course, because a knowledge of human nature gives great power over people. Such a course should not be confined to one centre, but the methods and people of several should be studied. This would require a year, perhaps two, at least, and necessitate a knowledge of German and French. These languages should not, however, be a grave difficulty in the way of any student with a mind trained as I have indicated. Besides, in any case, a reading knowledge of these languages is essential to the proper pursuit of medical work.

But, unfortunately, there are many, too many, who cannot go abroad for post-graduate work, or, in fact, take it even near home. These have my sympathy. There is, however, no reason to despair. Many such in the past have distanced not a few of their more favored brethren in the race, and I have no doubt many will do so in the future. If the post-graduate course should last during your whole professional life, the difference in advantages during the first year or two should not be of vital importance. Take advantage of all the opportunities at your own doors—of hospitals, laboratories, libraries, and instruction that is anywhere to be had. Even if your lot should be cast in the remote regions of the great Northwest, you can yet distinguish yourself. Jenner, Koch, and many such, were but country physicians. The times now are as ripe for great discoveries as they were in their days. For example, we are but awakening to the suspicion that the ductless glands possess great and far-reaching functions in the animal economy. This is but one field, and it lies almost a fallow ground awaiting the plowshare of the husbandman, and promising a rich harvest to him who tills. Be not discouraged if you fall short of your ideal of success; your efforts may enable some one else to grasp the prize. That is the history of every great discovery—the fortunate one but completes the work, it may be, of many others. “Not failure but low aim is crime,” wrote James Russell Lowell.

The powers of mental detachment, methodical habit, and thoroughness in work practically imply the possession of all those faculties that go to make not only successful students, but grace of character, because, with Goethe, “we would see that the little that has been done seems nothing when we look forward and see how much we have yet to do.” Such contemplation should keep us duly humble as to our own attainments, and charitable of the failings of others. Too often, however, we forget the

magnitude of what we don't know, while the magnitude of what we do know, or, rather, think we know, expands to most inordinate proportions under our admiring contemplation. This form of mental aberration is very prone to attack one just after graduation; therefore it becomes my duty to warn you against it. Be you never so wise, you can know very little more, compared with the total sum of knowledge, than the man whose ignorance you despise. The practice of our profession is one in which mistakes are too often inevitable. Much of it consists of the balancing of probabilities, nay, even of possibilities, in arriving at conclusions. Errors must, therefore, come to the wisest and most accurate observers. Remember this, and you will not be, as physicians usually are, over-sensitive in acknowledging your mistakes. The lessons of our mistakes should be our most valuable ones—always so carefully studied that we will be guarded against their repetition. "Be always displeased with what thou art, if thou desirest to attain to what thou art not," a valuable maxim for all; let it be yours, continually before you, that it may be reflected in your daily lives, urging you on to higher attainments.

To you, students of medicine, I offer my congratulations on your choice of a profession—a profession which, in the words of Sir James Paget, "offers the most complete and constant union of those qualities which have the greatest charm for pure and active minds—novelty, utility, and charity." It is not necessary that I pass any encomiums on the profession; your presence in these seats is the strongest proof you can give that *you*, at least, believe it to be the noblest profession, and the best disposition you can make of your lives.

Though noble in itself, forget not that it may be debased and put to ignoble uses. Its nobleness, so far as each of you is concerned, will be just in proportion to the nobility of the spirit in which you discharge its duties. "Pure motives and undefiled" will ennoble any calling, however ignoble in itself. Just as the widow's mite cast into the treasury was more than all the rich gave, so her work, however humble, may have been more noble than theirs, however great these may have been in the eyes of the world. Few avocations in life can be more ignoble than the practise of medicine simply for the monetary return it brings. To make it our aim to amass wealth by the ills and misfortunes of others should be repugnant to all noble minds. You may think that such moralizings are "twice told tales." True; but, as happens invariably in the history of the world, of the individual as well as the nation, material prosperity weakens the influence of ideals and increases that of the material, lowering the standard of our moral natures. Hence the necessity, as we advance in prosperity, that we keep high ideals before us, remembering, however, that, however high our ideals may be, they only have moral value as they

amend our lives. "With purity and holiness I will pass my life and practise my art" was the pledge required by Hippocrates of every one entering the portals of the profession. We have advanced greatly in science and prosperity since his day, but we have also fallen far below the ideal of the Hippocratic oath. We are the inheritors of a useful art, the heirs of a noble learning, and the depositories of a godlike knowledge. On the ideals we place before us to guide our efforts depends the influence of this inheritance on our successors. The late Professor Huxley, in one of his lay sermons, said : "Learn what is true that you may do what is right." Let this be your motive.

Your duty, now and hereafter, will bring you into close relationship with frail, suffering humanity. To succor such is the aim of your chosen profession. There will be much to try your patience and tax your endurance. Most people are naturally weak in courage and easily borne down by ills, real or imaginary. Such people are too often disagreeable at best, and, when ill, their disagreeableness is intensified. With such it will be your lot to deal. In your difficulties, forget not the Hippocratic oath, that you may do your duty in "purity and holiness." Be patient, tender, and kind to the poor no less than to those in better circumstances ; even to the hospital poor be gentle, giving them no unnecessary pain with finger, tongue, or manner. This will call for much self-denial, but let the Golden Rule be your rule of conduct. In so far as you do so will you justify the title of the physician as the friend of man.

Your future will be inevitably bound up with the ideals you now entertain. The ideals I have, in a feeble way, set before you, if made yours, may not increase your material prosperity—nay, more, they may, under certain conditions, interfere with it, because they will prevent your acquiring ill-gotten gain ; but they will ensure to you, in the end, a consciousness of duty well done that wealth cannot purchase. "A man's life consisteth not in the abundance of the things which he possesseth."

Even with such high purposes, you may fail to realize great objects in life, may fail to make any of the discoveries for which you have wrought with untiring industry, may fall far below your ideals ; but even then you will have your reward. With Rabbi Ben Ezra, you can say : "What I aspired to be, and was not, comforts me."

NOTES IN A CASE OF BRAIN TUMOR WITH AN ACCOUNT OF ITS PARTIAL REMOVAL.*

BY J. WEBSTER, M.B. TOR.,

Assistant Physician, Rockwood Hospital for Insane, Kingston.

ALTHOUGH the operation for the removal of a cerebral tumor is now not an uncommon one, there are features connected with the case I wish to record which, fortunately, are uncommon, and this must be my apology for occupying your time.

The patient, a married woman aged 43, was admitted to the Rockwood Hospital for Insane, December 19, 1894. The medical certificates of insanity stated that she was violent, destructive to clothing, and bent on suicide. She had been mentally deranged for about one year.

Family history, with regard to insanity, tubercle and syphilis, was good as far as could be ascertained.

Previous history. Married for nineteen years; the patient has had no children, and but one miscarriage. She was always temperate, industrious, and of a very happy disposition. Her general health was good, but there was a suspicion of specific disease.

History of present illness. During the winter of 1886 or 1887, the patient fell on some ice, striking the back of her head. There was no loss of consciousness, but she did not recover from the shock of the fall for some time. This accident had probably nothing to do with her present illness, although her husband holds it accountable for the intense headaches from which she has since suffered. These, however, do not seem to have commenced until the year 1890 or 1891. They were described as "burning pains" on the top of the head. About the end of 1892, twitchings of the left hand and arm appeared. At first slight and transient, as time passed they became more severe and frequent, and caused her to drop whatever she happened to be holding in that hand at the time, or to grip it so tightly that she could not let go. The spasms were frequently excited by the attempt to grasp anything.

About this time also she began to be troubled with inability to retain the urine, and consulted her physician, Dr. Gibson, of Belleville. To this gentleman I am greatly indebted for his kindness in furnishing me

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with much of her subsequent history. He discovered a fibroid of the uterus, to which he was inclined to attribute the vesical disturbance, and treated her accordingly.

During the year 1894 she was several times under Dr. Gibson's care for an ulcer of the left leg. He informs me that the headaches had become very severe, and there were attacks of giddiness which caused her frequent falls. At times there was numbness of the left arm, and the twitchings of this extremity were very distressing. He describes them as commencing in the thumb and index finger, and rapidly extending to the other fingers, and up the arm to the shoulder. On one occasion these contractions caused her to fall out of bed. There was some loss of muscular sense in the arm. The lower extremity was not affected while she remained under his care. She was becoming more childish, and there was considerable impairment of memory.

Suspecting a syphilitic lesion of the brain, the iodides were administered, but without benefit. The patient left Belleville, and in the course of two months was committed to Rockwood Hospital as insane. On entering she came under the immediate care of Dr. J. M. Forster, assistant medical superintendent, and it is to him the credit of making the correct diagnosis of the case is principally due.

Condition on admission. Patient fairly well nourished. Memory defective; ignorant of time and place. Speech normal; talks freely, making many mistakes, but frequently corrects them on afterthought. Pupils dilated, but equal, and respond to light. Lower muscles of left face partially paralyzed for motion; right angle of mouth drawn up when smiling or talking. Tongue protruded slightly to left. Motor paralysis complete in left hand and arm. Complaints of giddiness, and staggers when walking. Considerable motor paralysis of left leg and foot. The calf of this leg measures one-half inch more than that of the right. Patellar reflexes exaggerated on both sides. Plantar reflexes normal. Tactile sensation normal. Taste, smell, and hearing normal. Headache continues very distressing. Tenderness on percussion, very marked over the right parietal region. Urine voided involuntarily; no albumen or sugar in it. The ophthalmoscope reveals double optic neuritis; the arteries much diminished in size and the veins enlarged. Retinal hæmorrhages present in both eyes.

Treatment. For four weeks pot. iodide was administered. The dose was increased to thirty grains, three times a day; but no improvement resulted.

She became very dull and stupid, sleeping most of the time, often not wakening while being washed, and was with difficulty aroused sufficiently to take her food. Sometimes she would fall asleep while talking.

At times, however, there would be an improvement, lasting for two or three days. Then she would be quite bright, and there was an accompanying increase of power in the paralyzed limbs.

This transient improvement pointed to a diminished intracranial pressure, caused probably by a temporary decrease in the quantity of blood in the brain. It also pointed to a vascular tumor, as is well explained in Starr's admirable work on brain surgery, the vascular new-growth being likened to erectile tissue.

There was habitual constipation and she had frequent attacks of vomiting, accompanied by hiccough. At such times the patient was dull, and the pulse became small and intermittent.

During the third week of January, 1895, her articulation became defective, and this reached a climax on the 18th, when speech failed her entirely. Next day, however, she could talk as usual.

The only resemblance to a general convulsion ever noticed occurred on the 21st of the same month. Patient was asleep at the time and was observed by the nurse to become pale, after which there were tonic contractions of the muscles of the limbs. This was followed by vomiting. On February 5, 1895, her condition was as follows: Temperature, 98.1°; pulse, 72; respiration, 17. Speech, smell, taste, and hearing, normal. Sight had failed. Pupils unequal, the right being dilated. Headache in the old location unabated. Considerable tenderness on percussion over the right parietal region.

Sensation. Dulling of tactile sensation in left fingers, but in all other situations, normal.

Motion. In left upper extremity slight motion existed in fingers, at the elbow, and shoulder. Wrist entirely paralyzed. All motions of lower extremity diminished, but none entirely absent. Left lower muscles of face partially paralyzed. Urine still voided involuntarily. The *diagnosis* was made of a cerebral tumor, pressing on or involving the cortex, and probably the sub-cortical tissue in the region of the right fissure of Rolando, commencing principally in the motor centre for the thumb and index finger.

The *general diagnosis* of cerebral tumor of the right hemisphere was made from the following data: Persistent headaches for several years; vertigo and falls; failing mental powers and loss of memory; stupor; vomiting; double optic neuritis; history of convulsive muscular twitchings of left hand, followed by partial paralysis of motion, going on to almost complete left hemiplegia, and the gradual progress of these symptoms.

The *localization* was determined from the following: The course of the convulsive twitchings, commencing in the thumb and index finger, and

extending in order to the other fingers, wrist, elbow, and shoulder, exactly corresponds to the arrangement of the motor centres for these parts in the cortex of the brain around the fissure of Rolando. Also the course of the slowly progressing paralysis of these same parts, following the same order and afterwards involving the lower extremity and face, is explained in like manner. The tenderness on percussion over the right parietal region, the absence of sensory paralysis, and the slow progress of the disease, all point to a primary cortical lesion as against one of the internal capsule.

At a consultation of the staff of the hospital, it was agreed that an operation for the removal of the tumor was justifiable, and, permission having been obtained from the patient's husband, she being in good physical condition, on February 10 her head was shaved and thoroughly cleansed, and prepared for operation next day.

The operation. The head was again thoroughly cleansed, and the patient put under chloroform by Dr. Forster, $\frac{1}{6}$ grain morphia, as recommended by Horsey, having been given a short time previously.

Drs. Clarke and Anglin were also present, assisting. The fissure of Rolando was marked out by Thane's method and a \cap -shaped flap, two and one-half inches wide and deep, was raised in such a position that its posterior superior angle was situated one-half inch behind the upper end of the Rolandic sulcus. Hæmorrhage, although profuse, was easily controlled by pressure forceps and hot water, the larger vessels being ligated.

It was not desired to save the periosteum. With a one-inch trephine two buttons of bone were removed, and the intervening bridge, one-quarter inch wide, was cut away with forceps. The skull was five-sixteenths of an inch thick and very hard, being composed almost entirely of compact tissue. Three smaller buttons were then removed with a three-quarter inch trephine, and the several apertures united as before, with forceps. The larger trephine was discarded because of its inferior construction. The opening thus made measured $2\frac{1}{4} \times 2\frac{1}{2}$ inches.

No hæmorrhage from the diploë was encountered. The dura mater bulged excessively, and there was marked pulsation of the protrusion. The brain beneath could be seen to be very dark in color, and two large tortuous veins were visible coursing over its surface.

This stage of the operation had only been reached after one and a half hours' hard work. The patient's pulse had become erratic, and, as from the appearance of the brain there was a bright prospect of considerable hæmorrhage being encountered when it should be cut into, it was decided to finish the operation at a later date. Accordingly, all bleeding having ceased, the flap was replaced and sutured, but no drainage-tube inserted, the head dressed antiseptically, and the patient returned to bed.

It is not intended to recommend the slow and tedious method em-

ployed in opening the skull. It was only adopted from necessity, no other instruments being available at the time.

Next day, February 12, the temperature attained its highest point, 100.1°; pulse, 96; respiration, 15. By February 15 the temperature, pulse, and respirations were normal, and the patient bright and cheerful. There was no change in the paralysis of the left side.

Nothing of importance occurred until February 18, when the second part of the operation was performed. Morphia was given as before, and Dr. Forster again administered chloroform.

The dressing, which had never been removed, was now taken off, and the wound found to have healed by first intention. The stitches were taken out, and with the handle of a scalpel the flap was easily raised, no hæmorrhage occurring. It was found greatly thickened; a large clot of blood rested on the dura mater. On wiping this away, the brain was seen to bulge and pulsate, and have the same dark appearance as before. Two of the larger meningeal vessels were ligated and the dura incised a quarter of an inch from the margin of the bony opening, forming a flap which was reflected downwards. So great was the intracranial pressure that, with the first incision of the membrane, the brain forced itself through the opening made, becoming torn in so doing. There were no adhesions.

The fissure of Rolando divided the exposed brain into an anterior and posterior half, the ascending frontal and parietal convolutions being well exposed. Everywhere the cerebral substance presented a mottled, bluish-black appearance, nothing resembling normal brain tissue being visible. On palpation there was no resistance in any situation. That portion occupying the lower third of the opening—the area governing motions of the wrist and hand—was darker and more diseased in appearance than any other.

The conclusion was come to that the condition was one of an infiltrating growth, involving a very large area, and that to remove it all would be impossible, no matter how large the bony opening should be made. It was, therefore, decided only to remove what was possible through the opening as it existed.

The large Pial veins were tied, and with knife and spoon about one and a half ounces of diseased brain tissue were cut or scooped out. In consistency it resembled soft butter, so that any dissection was difficult. Hæmorrhage was troublesome, but not alarming. The cut surface remaining was grayish in color, and evidently not perfectly sound, although quite firm. As one piece was removed that below rose to its place, and in this way, when bleeding had stopped, instead of a depression remaining, there was a slight bulging. The dura mater was stitched with fine catgut, and this proved to be the most difficult part of the operation. The protruding

brain was held back with a flat spatula while the membrane was being sutured, but the pressure was remarkable and the approximation of the edges of the last portion was not satisfactorily accomplished.

The scalp flap was replaced and strongly sutured, a drainage tube being inserted in the most dependent part. The strictest antiseptic precautions were observed throughout, and at all subsequent dressings.

The growth proved to be a small round-celled sarcoma, very vascular, and showing many evidences of hæmorrhages.

The operation was well borne. Immediately afterwards the temperature was 98° ; pulse 70, of good quality; respiration 10. During the evening the temperature rose to $100\frac{2}{3}^{\circ}$; pulse 90; respirations 15. Next day, February 19, the highest temperature reached was $100\frac{3}{8}^{\circ}$, at 6 o'clock p.m. February 20, the highest temperature reached was $99\frac{1}{2}^{\circ}$, at noon. The dressing was changed, and the scalp flap found bulging greatly, forming a marked prominence. In two situations a small hernia of cerebral matter mixed with clotted blood had formed, the larger through the opening for the drainage tube, the smaller at the opposite angle, where the stitches had partially cut through under the strain to which they were subjected. These protrusions were wiped away, but it was not deemed advisable to close the openings, lest some brain be strangulated between the edges of the bone and scalp. Small quantities of similar matter were wiped away on each of the three days following. The remainder of the wound was healing nicely, and there was no sign of suppuration. Temperature had not risen above $99\frac{1}{2}^{\circ}$. Patient was resting well, was bright mentally, and suffered no pain after the first two days. February 25, a clot of blood, mingled with some cerebral substance of the size of a pigeon's egg, was wiped away. There was no pus. The evening temperature rose to 101° , and the pulse became intermittent. Next morning there was restlessness and stupor, with a temperature of 100° . The dressing was removed and the flap raised, no anæsthetic being required. The dura flap was seen completely reflected back and the exposed brain darkened, from small hæmorrhages into its substance, but there was no sign of gangrene or suppuration. The protrusion was removed with one sweep of a thin, flat knife, the trifling hæmorrhage which occurred controlled with hot water, a pad of iodoform gauze applied over the surface of the brain, and the flap turned down, but not sutured. The dressing was firmly applied. The general symptoms improved, but the prolapse recurred, and two days after was as bad as ever. It was again sliced off, and the scalp firmly stitched with many deeply-placed sutures, no opening for drainage being left.

Altogether three ounces of brain had been removed, and no perfectly normal tissue seen.

All went well for three days, when two stitches in the upper part of the wound were noticed to be cutting through. Others were inserted, but, in spite of all, in a week's time there was a hernia the size of a sparrow's egg. This showed no tendency to enlarge, and commenced to granulate. On March 18, it was found bleeding and ruptured, having been injured by the patient in some manner. This was followed by inflammation, which, after several days' treatment with the ice-water coil, subsided. The highest temperature observed at any time, $101\frac{1}{2}^{\circ}$, occurred during this period. An oedematous condition remained, which lasted for several weeks, an abundant serous discharge occurring. This disappeared at length, and granulation recommenced, the wound being completely healed by the middle of July. The patient's general health improved steadily from the first, and there was a complete disappearance of her former lethargy and headaches. She ate and slept well, and took on flesh rapidly.

Immediately after the operation, the loss of power in the left arm and hand was complete. The forearm was flexed, the flexor muscles being in a state of slight tonic contraction, resisting efforts at extension, but there was no opposition to passive movements of the shoulder. The thumb was adducted and flexed.

The lower extremity appeared to possess the power of slight motion in all parts, for, although the patient was unable to move any portion when bidden, slight movements and changes of position were noticed frequently.

The patellar reflex was not examined, but the plantar reflex was normal. The right angle of the mouth was drawn up to a much greater extent than before the operation, the left lower muscles of the face being completely paralyzed, causing great difficulty in the transit of food from the mouth to the throat. Protrusion of the tongue appeared impossible. The upper facial muscles were not affected. The pupils were unequal, the right being dilated, but both responded to light. The urine was still voided involuntarily. Tactile sensation did not appear to be altered. Localization was imperfect, especially in the hand.

On February 28 and March 2, unaided, the patient straightened the left arm, but has never done so since.

March 15. Tongue protruded for the first time.

April 1. Marked improvement in the paralysis of the face. Right angle of mouth less elevated. Less difficulty in taking food. Pupils equal and normal. No increase of power in upper extremity, and absolutely no motion in lower. Leg slightly flexed at all times, and with difficulty straightened.

April 8. Transient clonic spasms of left hand and arm, excited by any attempt at passive extension of forearm. Movement of joints of paralyzed limbs causes pain. Slight hyperæsthesia of left side.

April 11, 5 o'clock a.m., nurse reports a brief, slight, convulsion. As the lights were turned down, its character was not observed.

May 20. Gives evidence of having delusions. Thinks her husband is sleeping in the room adjoining.

May 26. Complained of the room becoming dark. Ophthalmoscope revealed marked optic atrophy.

Present condition. The patient's general health is excellent. She is confined to bed, and eats and sleeps well. Bowels never move without a laxative. Urine is voided involuntarily. She suffers no pain whatever.

At the site of the operation there is a pulsating tumor about the size of a small hen's egg. Temperature, pulse, and respirations are normal.

Mentally, she is bright, cheerful, and happy at all times. Somewhat childish, yet very clever at repartee. Memory is defective. She has delusions, but they are neither fixed nor prominent, and very harmless; *e.g.*, she imagines at times that she has a child, and that her paralyzed arm is the infant, and thinks that she can and does get up and walk.

Smell, taste, and hearing are normal, but sight is defective. Very slight hyperæsthesia exists in the two left extremities, and over the skin of neck and trunk of the same side.

Movements of the joints of the paralyzed limbs cause pain. The two extremities of the left side are completely paralyzed for motion. The forearm is flexed, and a slight tap causes clonic spasms in it. It measures half an inch less than the right. The arm cannot be raised to form more than half a right angle with the trunk without causing pain.

The leg is flexed, forming a acute angle with the thigh, the flexor muscles being hard and unyielding. No extension whatever is possible. It measures half an inch more than its fellow of the opposite side.

Passive motion at the hip is not interfered with. Plantar reflex is exaggerated. Ankle clonus is present. There is a very slight elevation of the right angle of the mouth, but no difficulty is experienced in mastication. Tongue is protruded slightly to the left. Speech is normal. The pupils are regular and equal. Motion and sensation of the right side are normal.

The cause of the hernia in this case was, no doubt, the size and vascular nature of the tumor, and to a certain amount of cerebral oedema, which, according to Von Bergmann, usually follows in a varying degree the removal of large pieces of the skull and dura mater. He says: "The removal of portions of the bony inclosures will cause hyperæmia in the part of the brain exposed, as a result of the removal of regular and accustomed counter-pressure. The blood vessels which are most apt to become dilated upon the removal of their supports are the veins. The immediate effect, therefore, of removal of a part of the roof of the skull is venous

hyperæmia of the exposed portion of the brain, and it is this venous hyperæmia which afterwards leads to œdema of the brain."

Fortunately such a prolapse as occurred in this case is rare. In a limited personal experience of four cases of operation on the brain or its covering, without replacement of the bone removed, a depression remained in three.

That the patient is living to-day is probably due to the giving away of the flap of dura mater, which was at first regarded as a calamity. This has allowed of more room for expansion, the intact dura being nearly as unyielding to pressure as the skull itself.

What benefit resulted from this operation probably arose chiefly from the openings in the bone and membrane. When these openings had been made, however, retreat was impossible, the brain being prolapsed and lacerated. On the other hand, a more radical operation might have accomplished more, but it is doubtful if surgical interference could be anything but palliative in such a case as this.

PHYSICAL TRAINING AND DEVELOPMENT AS A THERAPEUTIC MEASURE.

By B. E. MCKENZIE, B.A., M.D.,

TORONTO.

THE terms here employed, "physical training, and development," are to be understood as used in the widest sense, as including massage, gymnastics, and athletics.

The essential difference between athletics and gymnastics is one of aim. The aim of athletics (unless of the illegitimate professional sort) is pleasurable activity for the sake of recreation; that of gymnastics is discipline or training for pleasure, health, and skill. Gymnastics are more highly developed, present more features of educational value, are more comprehensive in their aims, more systematic in their methods, and productive of more solid and considerable results. H. C. Wood defines massage as "a generic name for external manipulations which are employed for the purpose of effecting the nervous and muscular systems and the general circulation."

These terms are also to be understood as limited by well-recognized laws of physiology. The indiscriminate practice of athletics, the careless and unscientific use of gymnastics, and the employment of massage by those who are ignorant of anatomy and physiology, are not to be endorsed.

The difficulties in the way of the proper use of these means of treatment are so great as to discourage nearly all medical men, and to prevent them making any effort to employ them in practice.

The necessity for attention to the physical development of children will be apparent to any one who will notice how many of them, especially in large centres of population, are unsymmetrical, distorted, and imperfectly developed. It is questionable whether the so-called blessings of civilization represent an unmixed good; the intellectual and social attainments of our times are great, but they have not been effected without cost.

In earlier times, when less humanitarian views prevailed, and the customs of life did not permit a survival of the weakling, a process of natural selection made man more robust; and the great lungs, stout heart, mighty muscles, sturdy bearing, and unquailing nerves of the forest dweller called

for no special care to bring him to a high condition of physical efficiency. The rush of modern times, the competition in the schools, the prizes to be attained through intellectual and social advancement, however, seem to have made us forgetful of the fact that man is first an animal in order of development, and that physical vigor is the necessary substratum upon which must ever rest great attainments.

The examination and careful measurements of primitive and uncivilized races and of the best models of Greek statuary prove that modern modes of dressing have greatly reduced the girth of the waist, displacing the stomach, liver, kidneys, and other abdominal and pelvic viscera, and interfering with their functional activity. The girth of the waist in woman should be but little less than that of the thorax, and normally it is larger proportionately to height in women than in men. Dr. Seaver, of Yale, reports measurements made of some of the best Greek statues, showing the girth of the waist among women to be only two or three per cent. smaller than the circumference of the thorax.

The following figures taken from Kellog, obtained in the measurement of women among the Chinese, Indian tribes, French, German, and Italian peasants, English and American women and men, show important facts regarding the relation of waist girth to height :

	Average Height.	Average Waist.	Per cent.
American women.....	61.94	24.79	40
Telugu women of India.....	60.43	24.65	40.6
French women (peasants).....	61.01	28	45.4
Chinese women.....	57.85	26.27	45.4
Yuma women.....	66.56	36.84	55.2
Civilized American men.....	67.96	29.46	43.3
Venus de Milo (statue).....			47.6
Mrs. Langtry.....	67	26	38.8

At Wellesley College Dr. Anna M. Wood has measured 1,100 women between the ages of nineteen and twenty-one years, with the following result : Average height, 63 ; average waist, 24.6 ; per cent., 39.

Some measurements which I have made of women by whom I have been consulted because of some deformity of the trunk show the average percentage of waist to height to be below 37 per cent.

It is worthy of note that the measurements just given of American women were of those who ordinarily dressed in the conventional styles. The Telugu women wear their skirts supported by a cord drawn tightly about the waist. The French and German peasants, for the most part, support theirs from the shoulders and discard waist-bands. The Chinese are low of stature, being two inches below five feet, but have waists two inches greater in circumference than the ordinary American woman or women of India. The women of the tribes of Arizona and New Mexico,

unfettered by dress, have a waist measurement 55.2 per cent. of their height.

A large number of school girls between the ages of eleven and thirteen years upon examination gave a waist measure of 23.5 inches. A number of college girls about nineteen or twenty years of age gave an average waist measure of 23.3 inches, thus showing that while general development had been going on the waist girth had been reduced two-tenths of an inch.

My purpose in referring to these measurements is to point out some of the evil results of modern customs and fashions—evils which are very far-reaching, which require varying means for their remedy, but many of which are readily corrected by improved methods of dressing, throwing off the corset, bands, and all such restrictions from the thorax and waist, and following this by a proper attention to physical development. The erectness and symmetry of the trunk must depend largely upon its having an opportunity to develop fully in all its diameters. The injury resulting from restriction, though marked in the atrophy of the muscles, is not limited to these structures, but affects the osseous framework and cripples the contained viscera, whereby injury is done to the progeny, and a condition results which strongly predisposes to deformities of the trunk, without the intervention of any distinctive pathological state.

Modern methods of dressing young women and girls cause the circumference of the waist and lower thorax to be reduced from one to five or six inches below the normal amount. Though it is always claimed by women that no part of the clothing is tight, yet it is seldom that more than a half inch of expansion is permitted in the lower thorax ; and it may safely be stated that if the calf of one leg be restricted for a few months or weeks in the same manner as the waist of the ordinary young woman, it would show marked atrophy when compared with the other.

In woman the liver is proportionately larger than in man, and her girth at the waist is proportionately larger. Such constriction, therefore, is responsible for much of the displacement found in the abdominal and pelvic viscera, and for atrophy of the trunk muscles, resulting finally in the distorted spine and other trunk deformities.

In 1887 the Massachusetts Medical Society appointed a commission to inquire into the work of gymnastics in the public schools. In the report made a year subsequently, it was stated that in visiting the schools of New York the children of German parentage could be readily distinguished by their superior bearing and development, which resulted from their training in the German turn-vereine.

Lawson Tait has spoken of the pessary mania. With just as much propriety might we speak of the craze for the use of braces and orthopædic

appliances. In the greater proportion of deformities *per se* a brace should never be applied. We must here distinguish between deformity and disease. Braces, splints, and orthopædic appliances find their chief legitimate use in cases of disease where it becomes necessary to put the affected part at rest and to protect it from injury. Some cases of deformity there are where braces find a proper employment, but in the vast majority of instances either the surgeon's knife should be called into use, or attention should be given to the rectification of the deformity by removing the restrictions of dress, by massage repeated at frequent intervals, and by regular and systematic drill, by which the patient is taught to correct her own errors.

I may best elucidate this part of my subject by briefly relating the following cases :

CASE I. M.P., a young woman, æt. 22 years, 5 ft. 8 in. in height, who for several months previously had been complaining of lameness, pain in the back and legs, had been treated for hip disease and for tubercular disease of the spine, and who, upon examination, showed a strongly marked lateral curvature ; was much depressed and discouraged because of her condition. Was dressed in the conventional style, and had for years been in the habit of wearing tightly drawn corsets and bands. She was first taken before a large mirror, and permitted to see and understand the amount and nature of her deformity. Then she was instructed how to stand and how to move her limbs and trunk so as to render the deformity less apparent. She was assisted in taking the best attitude that it was possible for her to assume. She was then put into a class with others who had deformities also, and given one hour a day in gymnastic work. Her work was so graded as to increase from day to day ; thus for several months went on together the processes of teaching and development. On the one hand careful attention was given so that she might understand the importance of always doing her best. The mirror was brought into constant use so that she might fully appreciate her deformity and the power she had for self-correction. The encouragement afforded her by the manifest rapid improvement increased her confidence, and both in general health and in vigor her progress was most satisfactory. At the present time, after a lapse of two or three years, she presents an excellent figure, and is in good health. The exact time when her deformity first appeared is not shown by her history, but it must have dated back several years previous to my first seeing her. It was noticeable that during the five months that she was directly under my care she found it necessary on several occasions to have her clothing so altered as to correspond with her increased measurements, thus showing that when the restricting clothing was removed, and attention was given to the development of the abdom-

inal and dorsal muscles, that her girths greatly increased, allowing her to present normal measurements.

CASE 2. Boy, æt. 7 years. I found a poorly nourished boy with a moderately marked roto-lateral curvature. A few weeks later, when he came to me for treatment he had chorea. Notwithstanding this the usual work in the gymnasium was begun. Improvement in the chorea was manifest in a few days, and in a week the boy had assumed control of his muscles. He was able to obey accurately the commands of the instructor. In this connection it is worthy of remark that chorea, hysteria, and other nervous disorders, have been reported as occurring less frequently in American schools where regular physical training has been introduced.

During the last seven years I have treated more than one hundred cases under circumstances which permit careful observations to be made. In my own house I have a gymnasium, where, under the direction of a competent woman, systematic and careful exercise is given every day for a period varying from one-half hour to two hours. The cases dealt with have been chiefly those of roto-lateral curvature of the spine, pigeon breast, flat-foot, and unsymmetrical development resulting from infantile paralysis. Incidentally, however, I have had opportunities for making observations in regard to other abnormal conditions, especially hysteria, weak lungs, and general debility.

In dealing with any case of spinal deformity, the good results to be obtained depend not so much upon the particular exercises employed as upon the manner of using them. It is necessary, in the first place, to gain the confidence of the patient and a hearty co-operation. For this purpose I know of no other means so effective as the proper use of the mirror to allow the patient to see her own deformity, and to understand that its correction is not to be attained by the use of props, or by influences from without, but by her own efforts. To this end class work is most important. If a patient be taken alone and given exercise it soon grows monotonous with most girls, and still more so is it useless to simply prescribe exercises to be taken at home. In themselves the exercises may be well selected and quite appropriate to the case ; but the patient will gain nothing by the inefficient work which will be done in nine-tenths of all such cases. Nor is it possible for one who is not thoroughly furnished and ready in gymnastic resources to retain in her class the interest which is so essential to success.

As I am frequently present myself during the exercises, and as I examine personally all cases, and repeat the examination at frequent intervals, making them in the presence of my assistant, the circumstances are peculiarly favorable for the most thorough and careful study of each case, and of the effects upon each individual of particular exercises.

It is a mistake commonly made that the purpose of exercise is chiefly or entirely to develop the muscles. True, muscle is increased in size and is purified by the removal from it of extraneous matter, such as fat and connective tissue, and its aponeurotic attachments are strengthened, but so also is the power of co-ordination augmented, so that movements formerly thought to be complex are effected with ease, thus training the nervous system and saving it a great expenditure of force. As time goes on what was found difficult becomes easy or is performed automatically. The one who has been well trained physically has better developed nerves as well as muscles, a quicker and more accurate co-ordination, a more elaborate organization of his spinal cord and of parts of his brain than has the individual whose muscular system is imperfectly developed.

In the accomplishing of an act muscular power is not more concerned than nerve condition. In fatigue, nerve exhaustion is largely concerned. Conversely, in the training which leads to a correct bearing and form, the nerve centres which govern muscular actions are themselves exercised and strengthened. Thus a physiological basis is afforded for an explanation of the fact that cases of infantile paralysis are improved by physical training. The condition commonly existing in these cases is that not all the ganglionic cells in the spinal centres affected are destroyed, but that some of them maintain connection with their muscles. By physical training these may be developed and their functions greatly increased.

Incidentally, a patient is taught to breathe much more deeply and to exhale much more completely, thus strengthening and training the respiratory apparatus, so that a girl who perhaps had never inhaled a full breath since the days of crying infancy takes into her lungs regularly twice as much pure air as was her wont. By this exercise being repeated I have seen a hollow and unsymmetrical chest assume a well-rounded and symmetrical form, and at the same time improved color and fullness of the cheeks, limbs, and trunk, and an increased tone in the muscle and alertness of bearing that betokened a much higher plane of vitality.

In dealing with defects in the limbs or feet arising from paralysis or other forms of weakness, in such cases as may best be treated by exercise the personal equation is of less moment. Repeated exercise and massage will accomplish its results without so definite a dependence upon the co-operation of the patient.

In postural deformities, however, the personal equation is of great importance, and the best and most complete success is attainable only when the hearty and intelligent co-operation of the patient is secured.

All the methods and advantages of massage are well understood and appreciated by the profession. By such means, however, it is difficult to produce much effect upon the deeply placed structures of the spinal

column. No ordinary methods will succeed in influencing the circulation in the bodies of the vertebræ or in their discs or ligaments. When the patient, however, is suspended by straps passing under the chin and occiput, and the entire weight of the body is thus allowed to stretch the shortened structures of the spine on the side of the concavity, the alternate stretching and relaxation, together with the moulding of the bony thorax by the hands of the operator, increases the circulation in these parts and the nutrition of the spine is improved. In the first efforts it is necessary to proceed with great caution, that injury may not be done, but when this is repeated daily it causes no discomfort, and is a means of giving massage to the most deeply lying parts of the dorsum of the skeleton.

Though my own efforts and observations have been confined chiefly to the correction of deformities and in strengthening weak parts, yet I have seen the results of systematic physical exercise as shown in the digestive apparatus, which was stimulated and strengthened, appetite being improved, absorption made more rapid, circulation through the liver more vigorous and even, the bowels more active and regular, through the general improvement and the greater strength and tonicity of the abdominal muscles.

Its effects have been long recognized in the treatment of those who are mentally imperfect. Both imbeciles and criminals, as a class, have physical proportions that are far below the normal, and the work done by Dr. Seguin, and more recently by Dr. Hamilton D. Wey in the Elmira Reformatory, point to a valuable but much neglected means by which the condition of these unfortunates could be much improved.

For the use of systematic exercise as a therapeutic agent I would claim :

(1) That it has not been sufficiently employed by the medical profession.

(2) That modern modes of living are rendering attention to this subject more imperative.

(3) That while it is the most efficient agent which can be employed in the treatment of deformities, and while it is an aid to all others, yet that it does not take the place of tried and proved methods.

(4) That it demands for its most successful use that we shall have persons who are trained especially for the performance of the work.

(5) That its purpose is not only and chiefly to develop muscles, but to reach the whole being, improving and strengthening the nervous, digestive, and circulatory apparatus.

Selected Articles.

DISASTROUS RESULTS FOLLOWING WHITEHEAD'S OPERATION FOR PILES AND THE SO-CALLED "AMERICAN OPERATION."*

BY EDMUND ANDREWS, A.M., M.D., LL.D.,
Professor of Clinical Surgery,
CHICAGO, ILL.

TEN years ago Mr. Whitehead, a surgeon of Manchester, England, conceived the idea of treating hæmorrhoids by a new method. He simply dissected out and cut off the whole lower inch of the mucous membrane of the rectum with all the piles and hæmorrhoidal veins, arteries, nerves, and connective tissue attached to them. Figure 1 will explain the plan:

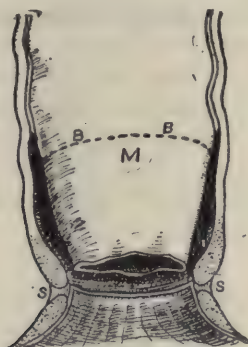


FIG. 1.—SS, The lower circular incision along Hilton's white line; M, Tube of mucous membrane dissected loose from the sphincter; BB, Dotted line showing the place for the upper circular incision.

Mr. Whitehead, after clearing out and trying to disinfect the rectum, commences by a circular incision, following "Hilton's white line," that is to say, the junction of the skin and mucous membrane along the verge of the anus. Then he dissects up the mucous membrane with the attached piles, hæmorrhoidal veins, arteries, nerves, and connective tissue, thus stripping bare the tube of the internal sphincter as high as the piles

* Read at the Mitchell District Medical Society.

extend, generally about an inch, so that the dissected part hangs loose in the anus like a cuff of bloody tissue.

The cuff is then cut off above the level of the piles and taken away, and the arteries ligated as fast as divided. The mucous membrane remaining above is then drawn down and stitched to the cut end of the skin, hoping for a union by first intention. This hope, however, frequently fails, in which case the stitches give way, the membrane draws up into the rectum, and a tubular or annular ulcer results, which contracts in healing and causes stricture.

Certain persons, calling themselves "Orificial Surgeons," have slightly changed the order of procedure by pulling down the mucous membrane and making the upper incision first, and the lower one last. For this slight variation they have invented the pompous title of the "American Operation." The final effect is the same in both. As the hæmorrhoidal vessels are all gone, the patient is permanently cured, since there is nothing left of which piles can be made in the future, just as a patient who has had both jaws excised will never have any more trouble with his teeth, or if his foot is amputated he will never have any more corns on his toes. A description of the peculiar mechanism and important functions of the mucous membrane and submucous tissues of the rectum will show that we are not dealing with a simple, smooth mechanical tube, but a highly specialized organ, which cannot be dissected out and destroyed, as is done in a thorough Whitehead's operation, without doing great and irreparable mischief to the patient.

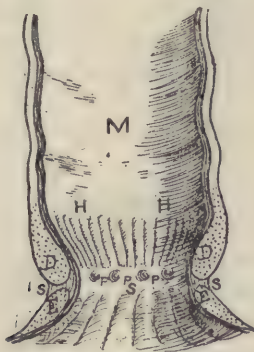


FIG. 2.—*M*, Mucous membrane above the sphincters ; *HH*, Columns of Morgagni ; *DD*, Internal sphincter ; *EE*, External sphincter ; *SSS*, Line of junction of the internal and external sphincters, also called Hilton's white line, or the junction between the skin and mucous membrane.

As above stated, the mucous membrane of the lower inch of the rectum has a peculiar mechanism, constituting it a tactile organ, which is the seat of a very acute special sense by which a healthy person is warned of the presence and downward progress of the fæcal mass. Its nerves also

possess remarkable reflex powers over the sphincter muscles, so that they resist the sudden and unexpected escape of fæces and flatus without the necessity of a constant mental attention and exertion of the will.

Figure 2 is a longitudinal section of the rectum. *DD* is the internal sphincter. *EE* is the external sphincter. *HH* is a band or series of little perpendicular projections each about a centimetre long. They are called the columns of Morgagni, and they are the seat of part of the special tactile sense of the rectum. The grooves between the columns terminate below in little pouches called *sacculi Horneri*, from the old anatomist Horner, who first described them. The grooves and pouches contain a reserve of tenacious mucus intended to lubricate the descending mass of fæces. The "orificial surgeons" have claimed these natural pouches as a new discovery, and call them "lesions," which possess a horrible reflex power, causing almost all the diseases of the body, "from the brain to the muscles." They cure them by the "American operation," or sometimes by merely splitting them down on a blunt hook.

Just below the columns of Morgagni are about eight small papillæ, *PPP*, surrounding the rectum just above the verge of the anus. Each one has an artery and a nerve, and under its base is a little ganglionic enlargement of the nerve. They are important tactile organs connected with the special rectal sense.

The junction of the mucous membrane, *SSS*, is called Hilton's white line, though it is not often distinctly white. It marks the lower line of incision in Whitehead's operation, and is the line or ring of connective tissue separating the external from the internal sphincter.

I have entered into a very extensive correspondence with eminent men both in Europe and America to gather facts as to the results of Whitehead's operation and of the "American operation," which, as before stated, is essentially the same thing. The following table gives a summary of the disasters reported to me :

TABLE.

Loss of the special sense by which the patient should be warned of a coming evacuation and enabled to prepare for it.....	8 cases.
Incontinence of flatus and fæces.....	23 "
Paralysis of the sphincter.....	4 "
Chronic inflammation of the rectum.....	1 "
Failure of union of the wound by first intention, with retraction of the edges of the wound, forming a contracting tubular ulcer with stricture..	9 "
Other ulcers.....	2 "
Irritable or painful anus.....	12 "
Eversion of the mucous membrane.....	4 "
Neuralgia of the pelvis and inferior extremities.....	2 "
General neurasthenia...	1 "
Fatal peritonitis.....	1 "

Fatal septic complications.....	1 cases.
Non-fatal septic results.....	5 "
Fistula in ano.....	1 "
Cases reported as having bad results without accurate description.....	127 "
Total.....	201 cases.

The first item in this table is the loss of the special sense warning the patient of a descent of fæces and an approaching evacuation. This is a remarkable condition not described by any author. The reason of the disaster is this : Whitehead's operation, if thoroughly performed, has swept away the whole tactile mechanism of the rectum, and has brought down from above a covering of mucous membrane naturally almost devoid of nerves of sensation, and therefore of nearly all tactile special sense. Hence the patient in many cases gets no warning of a coming evacuation of the bowels until he feels it in his clothing. However, this membrane, like the peritoneum and the small intestines, may acquire a very painful sensibility if it becomes inflamed. Now the patient gets a sort of painful warning enabling him to rush to the closet in time to save his clothing. If the upper incision be made pretty low down, preserving some tactile membrane, the mischief is much less.

Another evil of destroying the tactile and reflex mechanism is that the involuntary reflex action of the sphincters is ruined, and when fæces are found descending the patient can only retain them by a constant effort of attention and of will power, which is very annoying, and cannot be kept up for a great length of time.

One common accident is the failure of the effort at union by first intention. In this case the stitches give way, the mucous membrane which had been pulled down by force draws up again and leaves the anus and lower rectum occupied by a tubular granular ulcer around the whole circumference. This contracts in healing and produces stricture, which has resulted in numerous instances.

Another class of accidents, very common, consists of those which are included under the general name of septicism. Operations which by ligature or by actual or potential cautery close or sear the wounded parts are measurably free from this risk, but those which make extensive incisions have no such safety. The risk from this source in Whitehead's method is not very great, but it is something.

There are a number of thoughtless though reputable authors who talk in a glib way of rendering the rectum perfectly aseptic during an operation by tamponing its upper portion and scrubbing and disinfecting the surface of the mucous membrane below the plug. Something can be done in this way, but only imperfectly. The rectal mucous membrane is not like a surface of polished glass which can be perfectly cleansed by

mechanical and chemical appliances; on the contrary, it is a spongy, honeycombed structure containing several millions of glandular cavities, all opening into the septic channel of the organ and accessible to all sorts of germs. A thousand years of douching and scrubbing would scarcely accomplish complete disinfection of the cells, hence all incisions in it are made through infected territory.

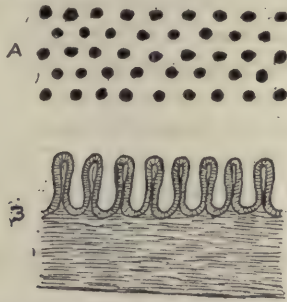


FIG. 3.—Diagram of the rectal mucous glands. *A*, The surface of the mucous membrane showing the position of the orifices of the glands. *B*, Section of the membrane showing the follicles cut through lengthwise.

The impossibility of any such complete disinfection of the tissues' as certain careless writers allege, is obvious. Still, partial purification can be accomplished by much diligence, and efforts for it should be thoroughly made, but let no man deceive himself by trusting to it as perfect and complete. Hence those operations which close up the wounds in the loose submucous connective tissue by ligature, by clamp and cautery, or by searing the wounds immediately with chromic acid or other caustics, are safer than the great wound of Whitehead's operation, which is slowly made, slowly closed by sutures, and cannot be cauterized.

Twenty-three cases in the table had incontinence of flatus, mucus, or fæces. Many of these are due to paralysis of the sphincter from destruction of the nerve supply.

There is reason to think that some operators have got confused by the flow of blood, and have taken out the internal sphincter with the mucous membrane. The gross error can, of course, be avoided by an educated man, but the most of the disasters reported to me might happen to any one. I do not agree with those few distinguished gentlemen who have boldly asserted that all the evil results are due to bad operating.

I have corresponded with a large number of eminent surgeons both in Europe and in this country to ascertain the general opinion as to this operation.

Prof. Mansell Moullin, of London, the author of "*Moulin's Surgery*," writes me that Whitehead's operation is not often performed in London,

and that there is a prevalent opinion that stricture is liable to follow it. He thinks its usefulness is restricted to a few selected cases.

Mr. Allingham, of London, thinks the Whitehead only adapted to a few cases with varices all around the rectum. For the great majority of patients he thinks ligature is the best of all operations. Smith, of London, always preferred the clamp and cautery to any other plan.

Mr. Reginal Harrison, a well-known surgeon in London, dislikes the operation. He prefers the clamp and cautery.

The surgeons in Berlin rarely perform it, generally preferring the clamp and cautery.

Prof. Esmarch, of Kiel, the inventor of Esmarch's bandage, never uses the Whitehead method. He seizes the pile with forceps, cuts it off, ligates any spurting vessels, and closes the wound with catgut.

Prof. Koenig, of Gottingen, never performs it. He writes me that he always applies the thermo-cautery, and gets his patients back to business in eight or ten days.

The surgeons in Vienna prefer the clamp and cautery in most cases.

I am unable to learn of any surgeon in France preferring the Whitehead. Verneuil and Fontau are much in favor of treating piles by dilatation alone, without any incision, ligature, or cautery, and many other French surgeons follow their example.

Prof. Marcy, of Boston, favors the operation, and has devised improvements on it.

Prof. W. J. Otis, of Boston, opposes it, and has seen bad results from it.

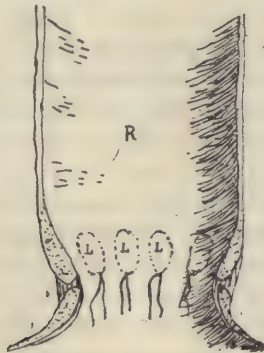


FIG. 4.—Ligation by Prof. Rickett's plan. *R*, Interior of the rectum; *L L L L*, The dotted circles represent the course of the ligatures beneath the mucous membrane enclosing circles of varicose tissue. The ends are left hanging out.

Prof. Wyeth, of New York, thinks the operation a good one if properly performed in selected cases. He has seen three bad cases after the "American operation" done by an "official surgeon" in Chicago.

Prof. McBurney, of New York, likes the Whitehead in cases where the varices occupy the whole circumference of the gut, but in most instances he prefers ligature done after Allingham's method.

Prof. Kelsey, of New York, a standard author on the rectum, says the "misfits" caused by the "American operation" are a constant source of income to him; that the "American" and the Whitehead are alike, and neither of them has any excuse for existence. He thinks "ten per cent. of the patients need a second operation to cure them, not of the piles, but of the operation for piles."

Prof. William White, of Philadelphia, says he has given the operation a fair trial, and now rarely performs it.

Prof. Hunter McGuire, of Richmond, thinks the operation unnecessarily severe, and that all the cases are better cured by ligature or thermocautery.

Prof. Merrill Ricketts, of Cincinnati, earnestly condemns both the Whitehead and the "American." He has devised a new operation by submucous ligature after the plan here shown.

Instead of sacrificing the entire mucous membrane he saves the whole of it. With a semicircular needle he inserts a series of silk ligatures

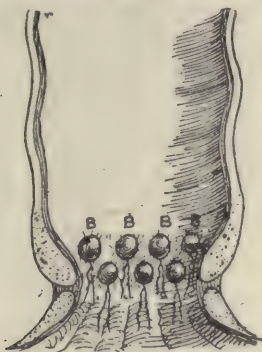


FIG. 5.—Dudley's method of ligation of flat, varicose areas. B B B, Buttons or knobs of varicose tissue picked up and tied.

through the lower part of the membrane, and surrounds and ties up the venous plexus in a series of loops, leaving the ends of the ligatures hanging out. It is not necessary to strictly tie all the varices. The parts between the ligatures become obliterated with great certainty. This will probably be found a valuable operation.

Prof. Roswell Park, of Buffalo, favors Whitehead.

Prof. Nancrede, of the University of Michigan, opposes the operation. The results he has seen are very bad.

Prof. Mathews, of Louisville, opposes the operation strenuously. He says the idea that it is at all necessary to dissect out all the varicose veins

is chimerical, and much injury is often done to the sphincter muscle, and that the ligature will cure all these cases much more safely. He adds, "In regard to the so-called American operation it is merely a modification of Whitehead's. The necessity for performing it never exists, except in a homœopathic brain. I have seen a great number of wrecks from this uncalled-for surgical procedure."

Many other surgeons have given me similar opinions. About four-fifths of them oppose the operation.

The peculiar cases supposed to demand Whitehead's operation are those where the whole circumference of the rectum and anus is covered with piles and varicose veins. Some authors seem to know of no way to get rid of them except to dissect out or destroy the whole plexus. This is a melancholy blunder. It is of the utmost importance to know that if you destroy by ligature or cautery about one-half the height of the main pile tumors, or one-third the area of any broad, flat, varicose tracts, the remainder of the tumors or other varices always atrophy and disappear. The destruction of the whole tactile mechanism of the organ is absolutely unnecessary.

Prof. E. C. Dudley, of Chicago, treats broad varicose tracts as follows :

He picks up the mucous membrane and subjacent veins with a tenaculum or with toothed forceps at a number of different points, and ties each bunch as he raises it. The spots tied are arranged in rows, as shown in the figure. The tied bunches slough off, and the enlarged veins in the areas between them become atrophied and disappear.

On the whole, the ligature and the clamp and cautery are the main reliance of most surgeons. It is possible that the submucous ligature of Ricketts, the new plan of Dudley, and the simple forced dilatation of Verneuil, may become favorite methods in the future, but Whitehead's operation and its offspring, the "American operation" of the "official" quacks, have proved far too disastrous to be worthy of the confidence of surgeons.—*Mathews' Medical Quarterly*.

THE TREATMENT OF DIPHTHERIA BY ANTITOXIN.*

By WM. H. WELCH, D.D.,

Professor of Pathology in the Johns Hopkins University,
BALTIMORE, MD.

ACTION OF DIPHTHERIA ANTITOXIN.

THE experimental evidence . . . is in favor of the theory that the antitoxin acts through the agency of the living body, and probably in the sense that it renders the cells tolerant of the toxin. . . . The serum has no curative influence on pseudo-membranous inflammations not caused by the Loeffler bacillus. . . . Without doubt the remedial rôle of diphtheria antitoxin is materially restricted by its inability to combat developed streptococcus sepsis, broncho-pneumonia, and other complications referable to secondary infection, or to stop impending suffocation by immediate removal of mechanical obstacles in the form of false membranes in the air passages; but the antitoxic serum is the most powerful agent which we possess to prevent the development of these complications and secondary infections. The timely administration of the healing serum, by antagonizing the effects of the Loeffler bacillus, antagonizes in large part the causes of the increased susceptibility to secondary infection, and thus greatly lessens the frequency of their occurrence. . . . In favorable cases the local diphtheritic process is arrested usually within the first twenty-four hours after the injection. Membrane may appear upon spots previously inflamed and invaded by the bacilli, but otherwise there is no extension of the membrane in the majority of the cases which are benefited. The area covered by the membrane becomes sharply demarcated, and the swelling of the adjacent mucous membrane disappears. The membrane may disappear by rapid separation or by gradual softening. Sometimes it persists for several days after disappearance of all other local disturbance. Large membranous casts are coughed up from the larynx, trachea, and bronchi under the serum treatment more frequently than under former methods. The rapid separation of the membrane in the lower air passages may cause sudden increase of stenotic symptoms. Nasal discharge is lessened. The swelling of the glands in the neck and

*Transactions of the Association of American Physicians, vol. x., 1895.

the surrounding œdema disappear as far as these are not referable to secondary infections. The utmost uncertainty prevails as to the influence of antitoxin in preventing the three most important complications as sequelæ of diphtheria: nephritis, heart failure, and paralysis. . . . It is apparent from what has been said that antitoxin is most strikingly beneficial in progressive fibrinous diphtheria, and especially in the prevention and cure of laryngeal diphtheria. In septic diphtheria the serum treatment is of little avail.

Antitoxic serum may produce unpleasant effects, but these do not involve danger to the patient. They are, in all probability, referable to the serum as such and not to the healing, so-called antitoxic substance contained in the serum. The most common undesired effect is some form of exanthem. . . . They may be accompanied by considerable elevation of temperature, and by pain and swelling in the joints. . . . The essential harmlessness of the serum has been demonstrated by over a hundred thousand injections. . . . The principal conclusion which I would draw from this paper is that our study of the results of the treatment of over seven thousand cases of diphtheria by antitoxin demonstrate beyond all reasonable doubt that anti-diphtheritic serum is a specific curative agent for diphtheria surpassing in its efficacy all other known methods of treatment for this disease. It is the duty of the physician to use it. The discovery of the healing serum is entirely the result of laboratory work. It is an outcome of the studies of immunity. In no sense was the discovery an accidental one. Every step leading to it can be traced, and every step was taken with a definite purpose and to solve a definite problem.

These studies and the resulting discoveries mark an epoch in the history of medicine. It should be forcibly brought home to those whose philozoic sentiments outweigh sentiments of true philanthropy that these discoveries, which have led to the saving of untold thousands of human lives, have been gained by the sacrifice of the lives of thousands of animals, and by no possibility could have been made without experimentation upon animals.

The article contains tables of statistics very carefully compiled, eliminating as far as possible the sources of error urged against previous statistics on this question. These show beyond dispute "reduction in the deaths from diphtheria by antitoxin treatment of fifty to sixty per cent. in nearly five thousand cases collected from hospitals in Germany, France, Austria, England, and America, and reported by forty different physicians, most of whom are of high reputation and large experience."

Stress is laid particularly on the very favorable opinion of Baginsky, supported as it is in his case by a wide experience and close observation of cases, of which he well says: "Naked figures are so little the expression of

the endless variations of clinical observation, of all those fortunate and unfortunate accidental circumstances which pertain to the constitution and nutrition of the patient and of the complications and difficulties which may bring danger in a mild attack, and lead to a successful issue in an apparently severe attack, that to the clinical observer such figures appear of little value in comparison with the treasure house of his accumulated experience."

Reference is made to a very valuable though involuntary experiment resulting from a failure in the supply of antitoxin during two months. In Baginsky service the mortality for a year previous, under antitoxin treatment, had been 15.6 per cent. During the two months when the supply of antitoxin failed it rose to 48.4 per cent., returning to about the original figure on the supply being renewed. Rork noted a rise of fatality from 33.1 per cent. during the serum period to 53.8 per cent. during the period of failure of supply. Ganghofner, from 12.7 per cent. to 53.2 per cent. ; Herm, from 22 per cent. to 65.6 per cent. ; in Trieste, during an epidemic, from 18.7 per cent. to 50 per cent.

Progress of Medicine.

THERAPEUTICS

IN CHARGE OF

GRAHAM CHAMBERS, B.A., M.B. Tor.,

Professor of Analytical Chemistry and Toxicology, Ontario College of Pharmacy; Lecturer
in Organic Chemistry and Toxicology, Woman's Medical College;

AND

WILLIAM LEHMANN, M.B. Tor.,

Physician to the Home for Incurables and House of Providence.

A SUBSTITUTE FOR SULPHUR WATERS.

- R. Crystalline hyposulphite of sodium, ʒiiss ;
Distilled water, ʒx ;
Pure glycerin, ʒv .

The hyposulphite of sodium is to be dissolved in hot water, and the glycerin added. A teaspoonful of this solution mixed with a quart of water charged with carbonic acid gas forms instantly an artificial sulphur water.

TREATMENT OF NERVOUS DEPRESSION.

The "pick-me-ups" of the druggist are commonly made up somewhat as follows :

- R. Potass. bromid., gr. xv ;
Spirit. chlorof., mxx ;
Tinct. gentian. co., mx ;
Tinct. card. co., mx ;
Spirit. amm. aromat., mx ;
Elixir simpl., ʒss ;
Aq. menth. pip., q. s. ad ʒi .

This is the kind of draught dispensed over the counter for the "head" produced by deficient exercise, or by overeating or drinking.—*Practitioner*, June, 1895.

SILK VERSUS CATGUT.

Kocher (*Universal Medical Journal*, June, 1895) states that in his operations for goitre primary union was obtained in only thirty-five per

cent. of the cases when sterilized catgut was used. He has now completely abandoned aseptic sutures, and only employs silk made antiseptic by an alcoholic solution of bichloride of mercury. Since adopting this method he has obtained primary union in every case.—*Therapeutic Gazette*.

PRESCRIPTION FOR HEPATIC TORPOR.

The following is a favorite mixture for "sluggish liver and indigestion":

R. Acid. nitro-hydrochlor dil., *mx* ;
 Tinct. podophyllin, *mx* ;
 Succ. taraxaci, *3i* ;
 Tinct. nucis vom., *mx* ;
 Syrup. zingiberis, *3ss* ;
 Aq. menth. pip., q. s. ad *3ss*.

Sig.—In water three times a day.

—*Practitioner*, June, 1895.

TREATMENT OF FRACTURED FEMUR BY SUTURE.

Walther (*Rev. de Chir.*, May, 1893) has recently communicated to the Société de Chirurgie of Paris the case of a man who, in falling from a wagon, received a severe injury to the knee. The lower end of the femur was broken into three fragments, and the tibia was displaced backward. The internal condyle remained attached to the tibia, and had been carried backward with the head of this bone. Walther, finding that the reduction and coaptation of the fragments of the femur would be attended with much difficulty, opened the knee by a long incision on the antero-internal aspect of the joint, placed the osseous fragments in contact and in their normal relations, and fixed them together by sutures. The patient made a good recovery. Twelve months after the operation the knee was still slightly swollen and the injured limb a little shorter than the other, but the patella was movable, and the leg could be freely flexed and extended by the patient, who was able to walk without any difficulty, and to follow his occupation of floor-walking. The result, the author holds, is certainly far superior to what would have been obtained by practising the ordinary treatment of fracture.—*British Medical Journal*, June 15, 1895.

COLLECTIVE INVESTIGATION ON ANÆSTHETICS.

Gurlt (*Universal Medical Journal*, June, 1895) states that in Germany the collective investigation upon anæsthetics has now been going on for five years. The use of ether has much increased. The mortality from chloroform seems to be much greater than that from ether, but very often grave disorders of the respiratory organs, such as pneumonia and bronchitis, result from the inhalation of ether, and death from those complica-

tions ought to be regarded as equivalent to death under anæsthetics. Ether was especially harmful after laparotomy.

Schleich holds that anæsthetics are more dangerous the more their boiling points differ from the temperature of the body. He has devised an anæsthetic mixture (chloroform and petroleum ether) whose boiling point is the same as the temperature of the body, and has obtained excellent results, all disagreeable sequelæ being absent.

Rosenberg recommended that the mucous membrane of the nose be brushed with a solution of cocaine before the commencement of the narcosis.

Rehn warns against the use of chloroform near a gaslight, as ethylene chloride is formed.—*Therapeutic Gazette*.

TAKA-DIASTASE.

Doctor Ferdinand Lascar recalls the fact that diastase has an action upon starch identical with ptyalin. Diastase is contained in a greater or less extent in the different extracts of malt, but in them its utility as a starch-converting agent will always remain a limited one. The diastase now made by Takamine is a dry powder, tasteless, of no perceptible odor, and powerful enough to convert one hundred times its weight of starch into a soluble condition. Doctor Lascar finds that it will convert fifty per cent. more than is claimed for it. One of the peculiarities of this product is the rapidity with which the conversion takes place, four minutes being sufficient to fully produce the change that neither iodine nor the microscope can detect unconverted starch. In the making of the tests, as well as in the manufacture of the product, heat should be guarded against, as it easily destroys the action of diastase. The field of usefulness of this product is not alone in infant feeding, but as well in the amylaceous dyspepsias of adults, which are by no means infrequent.—*Therapeutic Gazette*.

SERUM THERAPY.

From the *British Medical Journal* we take the following terse review: Schaefer (*Arch. gen. de Med.*, August, 1895) discusses the present position of the serum treatment, after referring to the researches upon which it has been built up:

(1) *Tuberculosis*. Richet and Hericourt were the first to treat the disease with serum obtained from retractory animals, but up to the present moment no very good results have been obtained.

(2) *Rabies*. Serum treatment does not appear to have a great future, as immunization by intensive vaccination gives greater success. (The latter is the Pasteur treatment.—ED.)

(3) *Pneumonia*. After referring to the investigation, the author observes that the serum treatment deserves to be considered. The reason that it has not been more generally adopted is probably on account of the difficulty of obtaining the serum from immunized rabbits.

(4) *Enteric fever*. Here the clinical application of laboratory facts has not given any very good results. This may be partly due to the length of time between the penetration of the poison and the treatment, and partly, possibly, owing to mixed infections.

(5) *Typhus*. The injection of serum from patients who had suffered from typhus was adopted, with good results, by Legrain in an epidemic in Algeria.

(6) *Cholera*. The cholera peritonitis of animals is very different from cholera in man. Behring recently announced that he had obtained a curative serum, but the results have not yet been published.

(7) *Syphilis*. The serum from the dog and lamb have been employed, and sometimes with good results.

(8) *Streptococcus infection*. Animals have been vaccinated against this infection. The serum so obtained has been used in puerperal fever with good effect. It has also been employed in erysipelas and angina. (Marmorecks serum is an assured success.—ED.)

(9) *Cancer*. The results as yet obtained are insufficient to carry conviction. (Treatment with the toxine of erysipelas and *B. prodigiosus* promises earlier success.—ED.)

(10) *Tetanus*. Well-marked tetanus is very difficult to cure in animals, and thus it is not to be wondered at that the results obtained in man are not conclusive. The serum, however, provides a valuable prophylactic agent against tetanus. (See favorable report in this issue.—ED.)

(11) *Diphtheria*. It is in this disease that the serum treatment has registered its greatest triumphs. Where mixed infections exist, the results have naturally not been favorable.

The slight accidents caused by the treatment are to be disregarded, in view of its remarkable efficacy.

The author then refers to the successful application of the serum treatment to snake bites. (Calmettes' serum is in use in India, and good reports have been published through the Pasteur Institute.—ED.) The general results thus far obtained by the serum therapy promise a successful future for this new method of treatment.

SURGERY

IN CHARGE OF

L. M. SWEETNAM, M.D. Tor.,

Lecturer on Therapeutics in the Woman's Medical College; Surgeon to the Outdoor Clinic, Toronto General Hospital; Surgeon to St. Michael's Hospital;

AND

A. PRIMROSE, M.B., C.M. Edin.,

Surgeon to the Hospital for Sick Children, etc.

A DEODORIZER FOR IODOFORM.

The *Lyon Medical* remarks that the odor of iodoform, if not dangerous, is very noticeable and annoying. The oil of turpentine causes this strong odor to disappear immediately from anything with which this antiseptic has come in contact. The hands may be first washed in water to which some turpentine has been added, and afterward with soap and water, and it will be found that the odor has entirely disappeared.—*New York Medical Journal*.

NOVEL TREATMENT OF FRACTURE.

Cut down on every oblique fracture of the leg, expose the fragments, bring them into accurate apposition, drill holes and fasten by steel screws. There is immediate relief of pain by this method, absence of tension and discomfort due to extravasation of blood into the tissues, and shortening of the period of treatment. This is especially to be recommended in the laboring man, to whom time is money.—*Arbuthnot Lane*.

DISINFECTION OF KNIVES FOR OPERATION.

Boiling in soda solution is required for complete asepsis of operating knives. The latter are not rendered dull by the treatment, but are doubtless often injured by contact of the blades with other instruments and with the vessel. Small, narrow tin boxes containing racks in which the knives may be placed with the edges free should be used. The bottom of the box has several perforations. The boxes are placed in a vessel of water and boiled. Knives should afterwards not be placed in carbolic solution, which dulls. Care is not required to have an exact 1 per cent. solution of soda, because a stronger solution does not injure. A chemically pure soda should be used. If powdered, an even tablespoon; if crystallized, three tablespoons to the pint is sufficient.—*Ible*.

INTESTINAL ANASTOMOSIS.

In a paper read before the New York County Medical Society Dr. Francis Holme Wiggin reported a clinical case, and also the results of twenty experiments on dogs. He objects to the Murphy button (1) because a foreign body is left in the intestine, which is sometimes retained, necessitating a secondary celiotomy for its removal; (2) the spring of the button may be made so strong as to cut through the coats of the bowel; (3) the weight of the button may anchor the intestine in a flexed position, and so cause obstruction, as in a case narrated; (4) there was some danger of the lumen of the button becoming plugged with hard fæcal matter; and (5) the sharp edges of the lateral openings in the button are very liable to cut through the bowel. Dr. Wiggin prefers Maunsell's method, which he says is suitable for any portion of the canal, and can be safely and easily performed by an experienced surgeon.—*The Medical News*.

STRANGULATED HERNIA OF THE APPENDIX VERMIFORMIS.

Dr. D. W. Graham reports the case of an elderly woman who came under his care with a swelling in the right groin, fluctuating and red, with every evidence of pus, and a strangulated femoral hernia. He opened down into the abscess, evacuated it, and washed it out. He could not find any intestine. The first thing that arrested his attention was a small foreign body, which looked like a piece of chicken bone, with fæcal matter surrounding it, and very suggestive of having come from the appendix. On further investigation he found what, on separating it from the surrounding inflamed tissues, proved to be the end of the appendix in the cavity, and with a perforation in it. It was blackened and swollen. A further search showed an old irreducible omental hernia not larger than the first joint of the thumb.

The chief problem to him was how to treat these contents of the hernial sac in the presence of so much pus and suppurating tissue.

It would be counted good surgery, he thinks, to have left the appendix and the nodule of omentum just as they were found, and treated the abscess cavity as an open wound; but he decided the better plan would be to take a little risk of infecting the abdominal cavity, and treat the sac and its contents as if no suppuration had been present. So, after thoroughly curetting, trimming, and washing all surrounding tissues, he pulled the appendix out and ligated its base in the usual way. The nodule was also amputated, and the sac cut off and closed. The cavity was treated as an open wound, and no effort was made to close the femoral ring.

The patient rallied from a critical condition, and did fairly well for seven or eight days. At this time, fearing intra-abdominal suppuration

from a change of symptoms, he opened the peritoneum through the femoral ring and introduced a small gauze drain, though no pus was found at the time or later. The patient died comatose at the end of two weeks. The autopsy showed the peritoneum free of infection of any kind, and no pus or inflammation about the stump of the appendix or that of the omentum. The kidneys were found to be very small, and the microscope showed an advanced degree of chronic interstitial nephritis.

It is not uncommon to see the appendix as a part of the contents of the sac in non-strangulated hernia, but this is the first time he has ever found it strangulated, or as the only strangulated viscus.—*Chicago Medical Recorder*.

CARCINOMA OF THE CÆCUM.

Dr. Carl Beck presented a specimen of carcinoma of the cæcum to the Chicago Medical Society which was removed from a man sixty years old. For a long time he had no other symptoms except a constant diarrhœa and slight attacks of fever, which led the attending physician to suspect him to be suffering from an attack of typhoid fever. On examination a very small tumor was found in the cæcal region. It was hard, immovable, and apparently the shape of the cæcum. Inasmuch as the vomiting and the dilatation of the ileum indicated an obstruction an operation was advised, which was done, a carcinoma of the ileo-cæcal valve being found just large enough to obstruct the intestines, so that a small lead pencil could not be pushed through it.

The pathological interest lay in the appendix, which was removed at the same time. It was entirely solid and free, but on the ostium internum of the appendix there were papillomatous growths, which indicated that there had been an inflammatory process present. On examination, the appendix proved to be solid—an appendix obliterans. The carcinoma was scirrhus, with very little cellular infiltration. For approximation Murphy buttons were used, side to side anastomosis. The patient, ten days after the operation, at the time of making the report was in good condition.—*Chicago Medical Recorder*.

PÆDIATRICS AND ORTHOPÆDICS

IN CHARGE OF

W. B. THISTLE, M.D., L.R.C.P. Lond.,

Assistant Demonstrator of Anatomy, University of Toronto; Physician to Victoria Hospital for Sick Children; Clinical Lecturer on Diseases of Children in the Woman's Medical College;

AND

B. E. McKENZIE, B.A., M.D.,

Lecturer on Orthopædics and on Surgical Anatomy in the Woman's Medical College, and Surgeon to the Victoria Hospital for Sick Children, Toronto.

NASAL AND POST-NASAL CATARRH, ITS PREVENTION AND TREATMENT IN YOUNG CHILDREN. *

In the course of an extensive article on this subject in the *Archives of Pediatrics*, October, 1895, J. Bemann, of Washington, urges the necessity of paying attention to the slight nasal catarrhs or colds occurring in young infants. These repeated congestions cause permanent derangement of the nasal septum and mucous membrane. "Colds" should be treated by the application to the nasal passages, with brush, of a two per cent. solution of nitrate of silver. No matter how young the infant is this should be done, in order to insure against permanent damage. The author also strongly recommends the use bichloroacetic acid in the treatment of chronic catarrhal affections associated with mucous hypertrophies or with polypoid degeneration of the nasal mucous membrane. The nose is first cocaineized, and the pure acid is applied by means of a glass tube drawn out to a fine point. The acid is blown out of the tube on to the hypertrophied area as into the base of the polypus. In case of large polypoid growths they are first removed, and the acid applied to the base. The author discountenances the use of galvano-cautery. Bichloroacetic acid, when used to destroy hypertrophies, is followed by normal mucous membrane, whereas, in the case of the galvano-cautery, cicatricial tissue replaces the destroyed area, and a dry catarrh is created. No slough is created by the acid, and, if cocaine be used afterwards, there is no pain. The applications should be repeated at intervals of from one to two weeks. Even in cases of atrophic catarrh or *oræna*, the use of the acid in the author's hands has been followed after sufficiently long treatment by complete cure.

GANGRENE FOLLOWING ACUTE RHEUMATISM.

A case of acute rheumatism with acute endocarditis, and followed by gangrene of the toes, is reported in the *University Medical Magazine* (1895, vol. vii., No. 2) by A. R. Allen.

The patient was a girl of ten years, who presented the typical symptoms of acute rheumatism, involving an ankle, knee, and hip. On the third day acute endocarditis developed. On the morning of the fifth day a blister was found covering the toes, and extending as far back as the juncture of the tarsal and metatarsal bones. Shortly after the rheumatic symptoms, which had been considerably relieved, recurred and continued for several days.

The foot was washed twice daily with a solution of permanganate of potassium. A few days later a slight separation of the gangrenous portion of the foot on the upper aspect occurred, sufficiently large to allow the insertion of a nozzle of a syringe, and the parts were thoroughly irrigated twice daily for several days, when the sloughing had progressed so far that the dead portions could be clipped away. It was then found that healthy tissues extended forward to the base of the toes and to the second joint of the great toe. This being unexpected and gratifying, all ideas of amputation were abandoned. The separation of the gangrenous portion was now rapid. In a few days the bones of the toes were clipped from their tarsal articulation, excepting the two phalanges of the great toe, which were a few days longer in separating.

INTRAUTERINE INFECTION WITH ENTERIC FEVER.

A case is reported (*Berlin. Klin. Woch.*, 1895, p. 539) by Freund and Levy, in which a woman in the fourth week of typhoid miscarried of a five months' infant. The child was alive, but died immediately after section of the umbilical cord. Foetus and placenta were forthwith placed in sterile vessels, and a bacteriological examination made. Plate cultures made with spleen pulp and with placental blood showed colonies of micro-organisms which were clearly *B. typhosus*. The cultures caused no coagulation of milk, led to no fermentation, did not form gas or indol, and grew on potato as an imperceptible layer. Examination of the foetus discovered nothing beyond a somewhat enlarged whitish spleen; in the placenta the decidua was very thick; no typhoid bacilli were recognized in sections. The case clearly shows that typhoid bacilli may pass from the maternal to the foetal organism without any modification of the placenta; neither hæmorrhage nor lesions of the villi or of their epithelium were to be found.

HÆMATOMA AND MYOSITIS OF THE STERNO-MASTOID MUSCLE IN NEW-BORN CHILDREN.

This subject is dealt with in an article in *Zeitschr. für Geburtsh. und Gynäk.* by Ludwig Pincus. The author regards the sterno-mastoid tumor as myositis following hæmatoma of the muscle. The differential diagnosis has to be made from myositis syphilitica, from abscess within the sheath of the muscle, and from myositis ossificans commencing in the sterno-mastoid muscle. "Sarcoma" of the muscle in infants, he suggests, is possibly hæmatoma. Syphilis is considered to play no part in the production of hæmatoma, and the effect of manipulation during the birth of the child is well described. As regards prognosis, on an average the tumor disappears in two to three months; suppuration rarely occurs. The injury to the sterno-mastoid muscle is rarely followed by persistent torticollis. The prophylaxis consists in the use of properly constructed forceps, avoidance of torsion, Winckel's method of delivery in breech presentation, and it is of importance that every text-book of midwifery should contain a chapter upon the injuries to the child's body which occur during the act of birth.

FORMOL IN THE TREATMENT OF PURULENT OPHTHALMIA.

Framagel, in *Annales d' Oculisque*, vol. cxiii., No. 2, recommends formol to be used as an irrigation in the strength of 1 in 2,000, and as an instillation in solution of 1 in 200. Irrigation followed by instillation of a few drops of the stronger solution is repeated four times a day.

The author concludes that while silver nitrate remains the leading antiseptic in purulent ophthalmia conjunctival irrigations are necessary, and an adjunct to the silver is needed. Formol fulfils this purpose. By combining the two, satisfactory success is certain.

Formol is not altered by light; it does not rust instruments; it is antiseptic; but its one disadvantage is that strong solutions (1-200) are painful; weak solutions (1-2000) cause no pain. It is sufficient to cure ophthalmia neonatorum when used alone, and it is not dangerous to the corneal epithelium, as silver nitrate may be in experienced hands.

HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

WILLIAM OLDRIGHT, M.A., M.D. Tor.,

Professor of Hygiene in the University of Toronto ; Surgeon to St. Michael's Hospital ;

AND

E. HERBERT ADAMS, M.D., D.D.S.

THE TEETH OF OUR SCHOOL CHILDREN.

J. C. McCoy, M.D., in a paper on this subject, read before the Dental and Oral Surgery Section of the American Medical Association, advocates training the children in the Public Schools in the proper care of the teeth. Each State Dental Association should appoint a suitable committee to arrange a manual on the subject, then induce the Educational Board of the State to adopt such a manual as a text-book to be used by teachers and taught in our Normal Schools, requiring teachers to pass an examination upon the contents of the manual, and teach the subject in the schools. Out of a school of 700 pupils where Dr. McCoy distributed printed slips, "Do you cleanse your teeth with a brush every day?" "Do you cleanse your teeth with a brush twice a day?" 50 cleansed their teeth twice a day, 275 used the brush sometimes, while 175 did not own a brush.

CHICAGO'S GREAT SEWAGE CANAL.

Chicago's great sewage canal grows in odiousness with the progress of the work. There is reason to fear, however, that opposition to the work was too long delayed. The bare suggestion of the project should have been met by the prompt exposure of its wickedness and danger. The people of St. Louis, indeed of the whole state, now appear to be alive to the appalling crime ; but a good deal more is required than an appeal to public sentiment through the American Public Health Association, or otherwise, to have any influence with people capable of undertaking such an enterprise. The State Board of Health of Missouri has adopted a resolution instructing its delegates to the American Public Health Association, soon to meet at Denver, to use every means to secure the aid of the association in a movement to prevent Chicago from dumping her sewage

into the Mississippi, there to become a part of the drinking water of St. Louis and other cities.—*Sanitarian*.

HOW IT WORKED.

Up to 1859 the mortality from typhoid fever in Munich, Bavaria, was 24.20 per 10,000 inhabitants, attributed to the use of well water. In 1860-1865, the wells and cesspits were partially cemented on the sides and bottoms; the mortality dropped to 16.80. From 1866 to 1873, there was partial sewerage; mortality, 13.30. During 1874 to 1880, sewerage was improved and continued; mortality, 9.26. During 1881 to 1884, the water and sewerage were still further improved; mortality fell to 1.75. Since 1885 typhoid fever has almost been unknown in Munich. Dr. Wilbur, of Massachusetts, commenting upon this subject in the *Atlanta Medical Weekly*, thinks that the time will come when typhoid fever will be wiped from the face of the earth.

THE TEETH AND LONGEVITY.

An editorial in the *Southern Dental Journal* calls attention to the fact that life insurance companies, before placing a "risk," will put the candidate through a most minute examination of every part of his anatomy except the teeth, and may reject an otherwise acceptable candidate for some flaw in his family record some generations back. The army and the navy recognize the importance of the teeth. "The loss or extensive caries of four molar teeth" will cause the rejection of an applicant for enlistment in the navy. Surely it would be well for life insurance companies to take into consideration the teeth of all applicants, as thereby they may avoid risks which will prove very unsatisfactory to them if accepted.—*Dr. G. S. Martin, in Dominion Dental Journal*.

ATLANTA'S WATER SUPPLY.

Atlanta, Georgia, receives her water from the Chattahoochee river, in its muddy and red state, which is pumped into a receiving reservoir about three miles from town; capacity of reservoir, 176,000,000 gallons. The water then flows by gravity through a system of filters into a clear water basin of 1,000,000 gallons. It is then taken from this basin by suction, and delivered into the city by direct pressure, very clear, pure, and sparkling. The system of filters is a combination of the Hyatt and other makes manufactured by the New York Filter Company. Capacity, 7,000,000 gallons daily. A certain per cent. of alum is employed to assist in the purification of the water, but no trace can be found in the water when it reaches the consumer.—*Texas Sanitarian*.

CANADIAN SANITARIA FOR CONSUMPTIVES.

Dr. P. H. Bryce read a report, on November 14, at the meeting of the Provincial Board of Health, on his recent trip through the Territories and British Columbia. The report gives a vast amount of information on the climate and temperature of the west, and concludes with the following observations in regard to a sanitarium for consumptives :

"It seems, therefore, that in the progress of the movement which this board has for years so persistently advocated for the establishment of hospitals or sanatoria for the proper supervision and treatment of consumptives there can be no good reason to doubt but that if any such institutes be properly conducted their location, whether in Muskoka, Calgary, or Kamloops, will have as happy results from the standpoint of cures as any sanatoria situated in similar climates in other countries, and how great have been their success we have to-day extended statistics to prove.

"It is to be hoped that in every province such action will be encouraged by both private benevolence and governmental assistance as will lead to the establishment of sanatoria at several centres, so that we may from year to year be able to establish from comparative statistics the real value of the various elements which go to make up the several types of climate."

Canadians have paid entirely too little attention to the climatic resources of their broad Dominion. There is little doubt but that Canada possesses some health resorts for consumptives which will have a world-wide reputation in the near future.

DEATH RATE OF AMERICAN CITIES.

From the principal cities of the United States, and Toronto, Canada, the following death rates per 100,000 of population from typhoid fever alone are reported for 1894 : New York, 17 ; Brooklyn, 15 ; Boston, 28 ; Philadelphia, 32 ; Baltimore, 48 ; Washington, D.C., 71 ; Pittsburg, 56 ; Buffalo, 36 ; Cleveland, 27 ; Detroit, 26 ; Chicago, 31 ; Milwaukee, 26 ; St. Louis, 31 ; New Orleans, 28 ; San Francisco, 35 ; Cincinnati, 50 ; Louisville, 72 ; Providence, 47 ; Jersey City, 76 ; Lowell, 55 ; Newark, 15 ; Dayton, Ohio, 20 ; Toronto, 17.

DR. A. C. BERNAYS, professor of surgery in the Marion Sims Medical College, St. Louis, has to defend himself in a suit for publishing a picture and an account of a surgical operation made upon a patient. There was nothing improper in the action of Dr. Bernays, and, if the court should decide against him, the rest of us may expect court notoriety soon.—*Texas Sanitarian*.

Editorials.

SIR WILLIAM HINGSTON.

DR. HINGSTON, of Montreal, has for many years been recognized as one of the leading surgeons of Canada. He is the only Canadian who has ever been requested to deliver the address in surgery before the British Medical Association. He accepted the invitation, which was a very cordial one, and acquitted himself admirably. On the last birthday of Her Majesty the Queen, Dr. Hingston was one of the Canadians chosen who received the honor of knighthood. His medical brethren of Montreal gave a banquet in honor of the event in the Windsor Hotel, Montreal, Tuesday evening, November 5. Dr. Craik, Dean of the Medical Faculty of McGill University, acted as chairman, while Dr. J. P. Rollet, President of Laval University, and Dr. F. W. Campbell, Dean of Bishop's Medical College, were vice-chairmen. After the usual loyal toasts Dr. Craik proposed the toast of the guest of the evening, Sir William Hingston. After a few remarks from Dr. Rollet the toast was received with great enthusiasm. Sir William replied in a brief but happy speech. We are told, however, that the speech of the evening was delivered by our genial friend, the witty Irishman from Kingston, Senator Sullivan.

THE SO-STYLED "AMERICAN OPERATION."

CONSIDERABLE confusion exists in the minds of some members of the profession as to the exact significance of the "American operation," as a recently devised operation on the rectum has been named. The name is a most inappropriate one, and is shedding no increased lustre on the American profession. This operation is a "Whitehead" with a simple difference of technique. In the Whitehead the incision is made at the white line below, and the dissection upward; while in the American operation the incision is made above, and the dissection made downward. The "American operation" is the outcome of a new organization of quack-styled official surgeons, who set about to cure all the ills that flesh is heir to by operations on the different orifices of the body. They do in most

cases an "all-round operation," which includes the American operation. We have seen some of their awful results here, and no doubt similar sad results have been observed in many parts of this continent.

The Whitehead operation requires experience and skill for its proper performance, and even with all this the result is frequently most unsatisfactory. We have reprinted in this issue an excellent illustrated article by Dr. Andrews from the *Mathews Medical Quarterly*, and agree with it completely. The Whitehead should only be done in carefully selected cases. The result is really uncertain; if it is a success, the result is brilliant, but a failure leaves the patient worse than before operation.

DOMINION REGISTRATION.

WE are pleased to note that the discussions which are being carried on, especially in medical journals, in various parts of Canada, on the subject of Dominion or inter-provincial registration, are thoroughly earnest, and yet moderate in tone. There seems to be no doubt that all the provinces want something of the kind; and, if so, surely there are no insuperable obstacles in the way. It happens that the Ontario Medical Council has, by its rules and regulations, caused a certain amount of irritation among certain sections of the profession in other provinces. Without any reference to the merits of the case, we have to state that the council of this province has often been misunderstood by outsiders. We had very good evidence of this at the meetings of the committee appointed by the Canadian Medical Association, and held during the last meeting of that association, when Dr. Pyne, registrar of the council, gave a good deal of information with reference to the attitude of our medical parliament on this question. He showed clearly that our council had, years ago, passed a statute, which still exists, pledging that body to grant reciprocity to any province having a central examining board, with a curriculum equal to that which prevails in Ontario.

This, apparently, caused surprise in some members of the committee, but led to a very important discussion as to the proper length of a medical course. Ontario now requires five years. The majority of the members of the committee appeared to think that a course including four sessions of eight or nine months each would be preferred by most of the provinces. We think that would be a fair compromise, which would not be opposed by the majority of the profession in Ontario. The question as to the standard of matriculation may cause differences of opinion; but there is no reason, so far as we have information, why a solution should not be reached. A *friendly* conference could, probably, accomplish all that is desired in a comparatively short time. Let us have such a meeting between representatives of the different provinces as soon as possible.

THE HOSPITAL CORPS AND THE MILITIA.

AT the recent meeting of the Canadian Medical Association, Deputy Surgeon-General Tobin read a very interesting paper on "Some Proposed Changes in the Militia Medical Service." We are at one with him in the main, but are satisfied that the Department will exercise its usual alacrity in making any change, and that he and the writer of this article will long be mustered out before anything but a *serious consideration* has been arrived at. However, there was organized during the Rebellion of 1885 a Field Hospital Corps, which took charge of the base hospital, at Saskatoon, Battleford, Fort Pitt, Moosejaw, and finally at Winnipeg. This corps of civilians without previous military drill or experience, although hastily summoned together, did excellent service, and while the discipline was not all that we should have liked, yet, from a medical standpoint, it accomplished its noble aim. The different regiments had their stretcher-bearers, and in every case their work was bravely and thoroughly done. Now, if the Militia Department will not establish a medical department, then let it equip the hospital corps of each regiment in a thorough manner. This would be a step in the right direction.

The Militia Department at present does not recognize a hospital corps, and does not pay the men who form it. It is a regimental affair—an appendage without government aid, and has to be kept up by the regiment from its regimental funds, and the private purse of the officers. The government will not equip it. The stretchers, medicine chests, water bottles, etc., are purchased by the funds given by the men and officers of the corps. This is not as it should be. The Militia Department is anxious to see each regiment as fully equipped as possible, but will grant no aid in accomplishing this end. This is poor recompense for time and money spent. The government should equip fully a hospital corps for each regiment, particularly the city regiments, and have these different corps brigaded for instruction and drill. This would give uniformity of instruction, establish an enthusiasm amongst the men, and form the nucleus for a medical corps in each of the large districts.

Then at the annual camps of instruction, a field hospital corps should be established, and a detachment from the different hospital corps in the district told off to man it. This would be under the P.M.O. of the camp, together with such medical officers as might be attached to it, and give the hospital corps men systematic drill and nursing instruction.

This would in no way interfere with the work and duties of the regimental surgeon, who would have the general health of his regiment to

look after, attend to minor ailments, and in cases of sufficient severity order his patient transferred to the field hospital, where nursing would be performed by the men of the hospital corps.

The cost to the government to fully equip a hospital corps, comprising four stretcher sections, would, according to the "Regulation for Medical Service, 1890," be under £100; or, for the three regiments in Toronto, \$1,500. They would then be in a condition to assume any duties in the field, or take charge of a field hospital; but, as a matter of fact, the three regiments in Toronto and the one in Hamilton are now almost fully equipped, all of which has been done at the personal expense of the men and officers of the corps. Let the government show some interest in this department, and thus make it a useful adjunct to the service.

DOCTORS' BILLS.

PHYSICIANS, as a rule, have great difficulty in collecting their bills. The present depression in business matters appears to be affecting the whole civilized world; and, in consequence, we understand that our profession in Great Britain, the United States, and Canada has suffered very materially. It appears to be pretty generally recognized among the laity that the doctor's bill is about the last that ought to be paid. It is only fair to say, however, that the doctors themselves are largely to blame on account of their very unbusiness-like habits and want of regularity and promptitude in sending out their accounts. Our profession, fortunately, is now more highly respected by the public than ever before. This is, probably, especially true in Great Britain, where the social and general status of the physician or surgeon is much higher than it was twenty-five years ago. *The British Medical Journal*, August 31, contains some very kind references to the medical profession, taken from the Hospital Sunday sermon recently preached by the Bishop of Norwich, as follows:

"Nor can I, nor shall I, be silent about the wrongs to which scores of medical men are subject. I refer to the startling contrast there is between the inexorable demands which society makes on medical men, and the elasticity of the social conscience with respect to his remuneration. I have known cases where men are summoned, at all hours and at all seasons of the year. Their bills are presented with timidity, if not anxiety, and they are received sometimes with amazement, sometimes with indignation, and sometimes relegated to oblivion. Nor are cases unknown where the righteous demand for work done is met by calling in another practitioner; he, in turn, to suffer as his brother did before him. I cannot permit myself to imagine that I address any such wrongdoer here to-day. But if I do, then, in my Master's name, I entreat you to

remember that the medical men of this nation are the highest type of their class in the world ; they are entrusted with the secrets of domestic life ; they have all our liabilities, with the special liabilities of their order ; they frequently die as martyrs to science, to suffering, to sympathy, to destitution. . . . Believing this, my plea is that every unpaid medical bill be discharged generously, gratefully, cheerfully, and that whatever account must be deferred in payment the last to be deferred is the account of him who is the human agent who has brought us into the world, enables us to continue our work in life, and many a time lays down his own in endeavoring to baffle death."

CRAIG COLONY FOR EPILEPTICS.

AT the meeting of the Ontario Medical Association held in 1894, Dr. McKinnon, of Guelph, introduced a resolution recommending the establishment of a home for epileptics, which was unanimously carried. The home, however, has not yet come into existence in Ontario. We find in the *Buffalo Medical Journal*, November, 1895, an interesting description of the Craig Colony for epileptics. The object of the colony is to provide for the four great needs of epileptics : (1) To give them schools ; (2) to afford industrial training ; (3) to provide a home ; (4) to furnish scientific medical treatment. It is situated in the Genesee Valley, Livingston county, New York, and contains about 1,900 acres of land. It is arranged on the village plan, and will look like a country town—not like a public institution. The patients, when received, will be set to work or study. There will be tailors, shoemakers, printers, bookbinders, masons, ironworkers, carpenters, painters, etc.

The journal referred to goes on to speak of the opening of the colony as follows :

"Work has been progressing very rapidly during the year to prepare existing buildings for the reception of patients. The first quota of patients, numbering sixty, will be taken from the almshouses early in November. It is proposed to receive two hundred during the winter, and perhaps more. Estimating the capacity of the present buildings at three hundred, additional buildings will be needed during the coming year to accommodate three hundred more patients before the six hundred now in the almshouses can be cared for.

"The patients taken from the almshouses and asylums will be known as state patients, and they will be provided for before any private patients can be received. They will be sent to the colony by the poor authorities of each county according to a form required by law, the blanks for which

will be furnished on application to the State Board of Charities or the superintendent of the colony.

"As soon as all epileptics now upon the public charge eligible for admission to the colony are provided for, private patients will be received at prices to be regulated by the Board of Managers, according to the kind and extent of care and attention required. Such patients may, if it be desired, erect cottages for their own use upon the grounds, upon application to the Board of Managers."

This is likely to prove a most admirable method of treating this class of unfortunate patients.

DR. JOHN ROLPH.

JOHN ROLPH, physician, barrister, and politician, was one of the most brilliant men this country has known. After receiving his general education in Cambridge University, England, he studied law in London, and, in due course of time, was called to the Bar of the Inner Temple. While engaged in his law course he also studied medicine under Sir Astley Cooper, and was enrolled a member of the Royal College of Surgeons. He came to Canada in 1821, and settled in Norfolk county, where he practised medicine and law, concurrently. He removed to Dundas in 1824, and in that same year was elected member of the Parliament of Canada for Middlesex. Mr. Clark Gamble, Q.C., in reminiscences furnished to Dr. Canniff, says: "My first introduction to Dr. Rolph was at the Assizes in London, about the year 1827, when he came into court carrying a pair of saddlebags in his arms, one side being filled with surgical instruments, vials, and a package of medicines, and the other with briefs and legal documents and books. He would attend to a case in court, and, when through, would catch up his saddlebags, ascend the court-house steps, mount his horse, tethered near by, and ride off to visit a patient." He probably did more work in law than in medicine during the next few years; but he entirely abandoned law in 1832, although he then had the reputation of being the most eloquent man at the Upper Canada Bar. In 1831 he left Dundas and settled in York (Toronto). During the next six years he was actively engaged in politics, as well as the practice of medicine. He also received a number of pupils, including Drs. H. H. Wright and J. H. Richardson. Something like forty years after this period, in 1870, Dr. Canniff, at a banquet held in the Queen's Hotel, "referred to the many excellencies of the veteran teacher of medicine, whose ability to teach he had never seen equalled in the new or old world." On account of his connection with the rebellion of 1837 he was

compelled to leave the country. We are told, in an article published in the *Mitchell Recorder*, October 25, that he was not in favor of an appeal to arms, but really desired a "mighty, popular demonstration of Canadians, English, and French, for the purpose of impressing the Imperial Government with the necessity of changing their colonial policy."

After he left Canada he practised medicine in Rochester until 1843, when he returned to Toronto and resumed his work as a practitioner and teacher of medicine.

His popularity as a teacher of medicine grew rapidly. "Rolph's School" was practically started in 1843. One of the first teachers he had associated with him was Dr. Joseph Workman. He soon re-entered the political arena, and from 1851 till 1854 was a member of the Hincks government. Dent, in speaking of him with reference to this period, says: "He possessed talents which, under favoring circumstances, would have made him a marked man in either professional or public life in any country. Chief among his qualifications may be mentioned a comprehensive, subtle intellect, high scholastic and professional attainments, a style of eloquence which was at once ornate and logical, a noble and handsome countenance, a voice of silvery sweetness and great power of modulation, and an address at once impressive, dignified, and ingratiating. His keenness of perception and his faculty for detecting the weak point in an argument were almost abnormal, while his power of eloquent and subtle exposition had no rival among the Canadian public men of the times." He resigned his position as Dean of "Rolph's School" in 1870, and died October 19 of the same year at Mitchell at the age of eighty-three. His remains were buried in Trinity Church cemetery in that town, and lay there twenty-five years. The casket containing the remains was taken from the grave, in accordance with the decision of the survivors in his family, and removed to Toronto, October 23, 1895, and interred in the family plot in Mount Pleasant cemetery. It is thought by many that this would be a suitable time to erect a monument worthy of the memory of a man so highly distinguished in both his public and private life.

Meetings of Medical Societies.

THE TORONTO CLINICAL SOCIETY.

THE twenty-fifth regular meeting of the Toronto Clinical Society was held in St. George's Hall, Elm street, Oct. 9, 1895.

The President, Dr. J. E. Graham, occupied the chair.

The following fellows were present : Doctors Graham, Brown, Meyers, Walker, Davison, Greig, J. A. Temple, Spencer, Macdonald, Anderson, Macfarlane, Trow, Grasett, A. H. Wright, Bingham, Britton, Baines, Barrick.

PRESIDENT'S ADDRESS.

Dr. J. E. Graham then read his inaugural address. He said that he felt it an especial honor to be chosen as president of a society which had for its object the study of the clinical aspect of disease. The most useful information was that acquired at the bedside. All due credit must be given to the bacteriologist and the pathological histologist for all the light they may throw on the subject of disease as the result of their labors, but we must not underrate the knowledge acquired from observation at the bedside and from a careful examination of the gross appearance of the organs on the post-mortem table.

In a review of the history of medicine during the century that was closing several eras could be noted. The first might be termed the clinical era, that in which Laenec, Bright, and Addison flourished. In our practice to-day we probably owe as much to these observers as to those of more recent date. Laenec's work on stethoscopy was a finished work. The modern stethoscopist had added very little in this department, while some valuable hints of Laenec's had been forgotten. They had few instruments of precision, yet so accurate were their observations, and so careful their reasoning, that the results achieved have stood the criticism of hundreds of observers and stand as facts to-day.

A second era was that of the morbid anatomist, represented by Rokitansky and Virchow. From this period the microscope dated its pre-eminence. In clinical medicine the thermometer was introduced. In 1871, the essayist said, he had the privilege of attending Rokitansky's

lectures. He was not a popular lecturer, and his classes were small. His work, however, was still standard, and had helped to form the groundwork of our morbid anatomy. Reference was then made to the great work of Virchow on cellular pathology. The work of these distinguished men was being carried on by their disciples, Cohnheim and Von Recklinghausen, and others.

The next era was that of bacteriology, commencing between the years 1875 and 1880, when Pasteur made his discoveries in this department. But it was not until 1882, when Koch discovered the tubercular bacillus, that the profession first became interested in this branch of science. Since then it had undergone most rapid development. Following the isolation of micro-organisms, pathological and benign, the attention of scientists had turned to the study of the toxins produced by the bacteria. Many pathological processes originally ascribed directly to the bacteria were now shown to be caused by these toxins.

During the past ten years the attention of investigators had been turned to the study of the symptoms of the patient during life. Now they were aided with many instruments of precision. A more elaborate analysis of the secretions and the excretions of the body during health and disease could now be made. Bouchard was prominent in this line of study. The essayist referred to the work being done in Johns Hopkins in this department. The attention paid to examination of the blood and the urine was commented upon; the careful analyses of these would assist very materially both in the etiology and the treatment. It was to be remembered that diseased organs changed after death. As an example the speaker referred to the disappearance of an eczema after death. The great advancement of the future would be made in the study of pathogeny other than of morbid anatomy.

The essayist then spoke of the value of phonography in the study of disease. He advanced the opinion that if the phonograph could be applied to the registering of heart sounds, it would be of great service in the study of cardiac diseases. There were many abnormal heart sounds, apart from murmurs, which had not yet been definitely described, but which indicated an abnormal condition of the organ.

Much careful attention was required yet in the investigation of the animal fluids. Much of the present study of them was a mere matter of routine. The analyses of these must be pushed still further.

Dr. Graham then alluded to some recent advances in the line of treatment of disease. Treatment by serum therapy had been successful in diphtheria and tetanus. Animal extracts were now a recognized form of treatment. The thyroid extract had become an established means of treatment of myxœdema. An embryologist had made the remark to him

the other day how difficult it was for the physician to attempt the cure of disease when so little was positively known of the very foundations of life—of cell development and cell growth. His reply was that there were human beings ill all about us who must be attended to in the best manner known to us. Treatment could not be deferred until the physiologist had explained the phenomenon of existence.

ABDOMINAL ANEURISM.

Dr. A. A. Macdonald presented the history of a case of abdominal aneurism.

The patient was a man aged 48, always strong and healthy. He was a railroad man, and his work had been of a heavy nature. About two years ago he noticed, after a heavy lift, a pain in the abdomen. He thought it was a strain caused by the lifting. His physician was unable to tell what was the matter. Some time after this he noticed a lump on a level with, and to the left of, the umbilicus. He had some pain in this lump, but it was not severe. Shortly after this Dr. Macdonald was called to see him. He was then suffering from cough, the result of bronchial irritation; he had diarrhoea and vomiting, and was losing flesh rapidly. The vomiting was a marked feature. At that time the pain was noted a little below the region of the pylorus. So marked was the condition that it was considered, possibly, cancer of the pylorus. The tumor was not movable; it was hard and rounded. The diagnosis was unsatisfactory. Patient was advised to enter the hospital and have an exploratory incision made. The patient was very anxious to know if a cure could be promised; he was answered in the negative. The operation was not urged. The patient decided to wait. The diarrhoea became dysenteric in character, and was not easily checked by the ordinary remedies. Urinary analysis, negative. Ascites followed to such an extent that the lump became out of reach by palpation. About this time Dr. Baines was given charge of the case. Dr. Baines said he saw the case on August 22. The patient was suffering from dyspnoea, anasarca, and marked ascites. Calomel and magnesium sulphate were freely given, causing three or four motions in the twenty-four hours. Nitro-glycerine and digitalis were administered. A week after he entered the hospital, he was tapped, and eighty-four ounces of fluid drawn from the peritoneal cavity. This relieved him a good deal for the time being. There was at this time a very slight trace of albumen in the urine. On September 5 he was put on Guy's pills, one every four hours. On September 15 he was tapped a second time, and 134 ounces drawn off. This relieved him again for a few days. September 25, he was obliged to take to his bed, which he had not done up till this time in the hospital. His neck was markedly swollen. The

throat was examined and œdema of the glottis was detected. In a few hours the man died.

CIRRHOSIS OF LIVER.

Dr. Baines said that he had had the patient admitted to the hospital with the idea that cirrhosis of the liver was present. Although many of the clinical signs were wanting, there was no jaundice, nor any marked tenderness over the liver. He had not known of the lump previously. He had not noticed it when examining the abdomen. The walls were thick with layers of fat, and this, with the œdematous condition, made it impossible to detect any tumor in the cavity. The pulse was small, rapid, and dicrotic. The diagnosis rested between cancer and cirrhosis.

Dr. H. B. Anderson reported on the pathological condition found. There was great general anasarca. There was effusion into the serous cavities—the pleura, the pericardium, and the peritoneum. There was marked hypertrophy of the heart. The lungs were markedly emphysematous. The liver was congested. The kidneys were also congested, and the capsule adherent to a certain extent. The surface of the kidney was rough, and there were some small cysts beneath the capsule. The intestines were normal. The aorta was markedly atheromatous with calcification. An aneurism was found at the site of the superior mesenteric artery. It was about four inches in its long diameter, and three inches across, being oval in shape. Laminated clots filled the superior mesenteric so as to completely occlude it. The remote portion of the artery had dwindled into a fibrous cord. The aneurism had not made pressure posteriorly. It had pressed forward, and was firmly adherent to the head of the pancreas, which organ it had shoved upward, causing pressure to be exerted on the structures in the portal fissure. The mesenteric artery did not seem to be enlarged. A microscopic examination of the kidneys showed an increase in the interstitial connective tissue and a hyaline condition of the glomeruli. The collateral circulation could have been carried on through the pancreatico-duodenalis superior from the hepatic anastomosing with the pancreatico-duodenalis inferior from the superior mesenteric. Besides, by the colica media of the superior mesenteric anastomosing with the colica sinistra branch of the inferior mesenteric.

Dr. McFarlane asked if any bruit was heard when the case was first examined.

Dr. Macdonald replied that there was none in front. He had not listened at the back, as he had not suspected aneurism.

Dr. Grasett said it was not clear to him how collateral circulation was kept up.

Dr. McFarlane said that he failed to see how the collateral circulation was carried on, as the aneurism seemed to be a healed one, and completely occluded the aorta.

Dr. Anderson pointed out that the lumen was not completely closed.

Dr. Graham asked if pulsation in the femorals was noted. He thought the possibility of aneurism in such cases should be kept in mind. He referred to a case where he had made an error in diagnosis in this way.

Dr. Meyers read an interesting account of a recent visit he had made to Lourdes.

METRRORRHAGIA CURED BY OPERATION.

Dr. Bingham reported the history of a case of metrorrhagia cured by ovariectomy. The patient was referred to him by Dr. M., July 15, 1894. The patient was the mother of two children, the youngest of whom was ten. For nine years she had been a sufferer from menorrhagia. She flooded for about fifteen days out of each month, during which time she was bedfast. She lost enormous quantities of blood. She was very bad during the past five years, having to keep in bed most of the time. When she came to the city for treatment by him, she was exceedingly feeble, was much emaciated, and complained of a very great deal of pain in the back and down the thighs, showing that there was pressure on the sacral plexus. Altogether she was in a very bad condition. On examining the uterus nothing was found to account for the severe hemorrhages in the way of local tumors or myomatous masses, except some small bean-like masses in the broad ligament. The uterus itself was very large and flabby and was movable. She was put in St. John's Hospital. He considered it a case for electrical treatment, thinking that if electricity would do any good it should in a case like this, being a case apparently of subinvolution with great prostration and anæmia. Electrical treatment was persisted in for eight months. At the end of that time her condition, as far as the loss of blood was concerned, was not improved. Her general health, however, was improved. Thorough treatment by curettement and tamponage and the other routine treatment having been previously tried without any improvement, the woman, in March, 1895, consented to undergo radical treatment for the cure of the condition. The operation was a simple one. The right ovary had connected with it a cyst; the left was normal. The uterus was as large as one would expect to find it in the third month of pregnancy. It was flabby, soft, and congested. The principal point in connection with the operation was the difficulty of controlling the oozing. It was afterward learned that the woman was a subject of hæmophilia. For years, after the slightest scratch on the hand, the bleeding was very difficult to check. It took three-quarters of an hour to control the bleeding of the stump and from the fundus itself, where there had been some adhesions. A drainage tube was inserted and the wound closed in the usual way. The tube was pumped out every fifteen minutes for several hours. The wound healed by first intention. The patient made an

uneventful recovery. She was now able to attend to her household duties. The speaker said he would like to know why the electricity failed to help the case.

Dr. A. A. Macdonald said that his opinion was that the benefit from the use of the electricity was due to its astringent and escharotic action on the uterine mucous membrane ; but that it would have no effect in curing the ovarian condition.

Dr. Baines said that he had found electricity very beneficial in these cases.

The society then adjourned.

The twenty-sixth regular meeting was held in St. George's Hall, Elm Street, November 6th, 1895.

After the opening business Dr. W. H. B. Aikins presented a boy, aged seven, suffering from syphilis. A hard chancre was situated beneath the prepuce, and a macular rash covered the body. Some two or three months before he had been sleeping with a servant girl who had syphilis.

Dr. Fotheringham related a case he had seen occurring in a child three years of age, two hard chancres being found on the side of the nose. Inoculation had come through a syphilitic mother, who had mucous patches, kissing the child. She had noted some abrasions on the face before kissing the child.

Dr. J. E. Graham presented a boy, aged thirteen, who gave a history of paralysis of the throat following diphtheria, subsequently followed by hæmiplegia of the left leg and arm. The left leg was considerably smaller and shorter than the right ; but the feet were about the same size. Slight athetosis could be noted when the patient attempted manipulations with fingers of the left hand. Sensation was normal. Left knee-jerk somewhat weak. The hæmiplegia was probably due to the presence of an embolism or thrombus, whose formation was due to the poisoned condition of the blood. Another possible cause that he had thought of was anterior poliomyelitis.

Dr. D. C. Meyers said he considered from the general appearance of the case that the condition was due to diphtheria poisoning, and that the lesion was somewhere in the right brain. The presence of the reflex would destroy the theory that the affection was of the anterior horns of cord. Sach said there was no wasting in these cases. His experience was different ; in the majority of cases there was wasting.

Dr. G. S. Ryerson related the case of a woman, aged 78, who, up till three years ago, had defective vision, the result of advancing age. Suddenly one night when at church she felt something strange happen to her eyes, and, upon looking at her prayer book, found she could read readily

without glasses. The doctor found, upon testing the eyes, that the sight was very good. He had always been rather sceptical regarding the appearance of "the second sight," but this appeared to be a *bona fide* case. The cause, he stated, was supposed to be due to a swelling in the lens.

Dr. J. A. Temple reported a case of cholecystotomy upon which he had recently operated. The patient, a woman, aged 48, had been in failing health during the past summer, and went to the seaside. Shortly after returning she experienced a severe pain in the region of the liver, accompanied by vomiting and jaundice. Subsequently she had two other attacks. During the last an abdominal tumor was discovered on the right side. From its shape and location it appeared to be one of renal origin. It was not moved by respiration. A tympanitic note could be elicited over the position of the kidney. It was smooth, and felt firm and hard. The liver was noticeably enlarged. Among the several medical men who saw the case besides the speaker, there was a difference of opinion as to whether it was renal or hepatic. His own opinion was that it was connected with the liver. An opening showed it to be the gall-bladder, which, when opened, was found to be thickened and enlarged, and to contain a milky fluid. A gallstone was also found at the junction of the cystic and the hepatic ducts, which was extracted. The patient was recovering.

Dr. J. E. Graham remarked the advance in diagnosis of tumors of this sort since the advance in hepatic surgery. He had seen the case reported, and leaned to the diagnosis of renal tumor. He detailed the various points in the diagnosis.

Dr. F. Strange, who had also seen the case, thought the tumor was connected with the liver, owing to the enlarged condition of that organ, due, he thought, to subacute hepatitis.

TORONTO MEDICAL SOCIETY.

THE regular meeting of the society was held on October 24 in the Council Building, President W. H. Oldright in the chair.

DIPHThERIA IN AN INFANT.

Dr. W. J. Wilson reported a case in practice—diphtheria in an infant one day old, contracted from the nurse. The history had been given him by Dr. Rowan, of Stouffville.

On September 24, the doctor was called to see a woman aged twenty-two, married, in confinement. Found that she had been delivered of a child twenty-five minutes before; the placenta was not yet expelled. A

neighbor woman had washed and dressed the child. After the third stage was over the uterus contracted well. The neighbor washed the mother's genitals with carbolized water. As he was retiring from the case the neighbor reported that two of her children had sore throats; he was asked to see them. There was a large amount of deposit in their throats. The mother had been washing the children's throats out before attending the confinement, and had not washed her hands after doing so. Eight hours after the delivery the infant's umbilical cord was washed with a solution of boracic acid and dusted with a mixture of iodoform and boracic acid powdered and covered with absorbent cotton. The mother was sponged with a carbolic wash three times a day. On the fourth day there was slight oedema around the umbilicus. The next day this was increased, and assumed a coppery red color. The same day the stump separated. On the sixth day the umbilicus was covered with a false membrane. This condition continued until the 10th day, when the child died. On the fifth day the mother's labia appeared oedematous; on the sixth day this was increased and the discharge became malodorous. A diphtheritic deposit appeared on the genitals and inner portions of the labia. The breasts ceased to secrete; the temperature rose, and on the twelfth day vomiting set in. Death ensued. There was a little deposit in the throat. From the ninth day the oedema of the vulva was very great. The labia became tense and crowded together. There was no tenderness over the uterus until the thirteenth day; on the fourteenth the uterus was tender and enlarged. The treatment consisted in the use of carbolic lotions until the sixth day. When the discharge became foul, bichloride and peroxide of hydrogen were used, and a pad saturated with a solution of permanganate of potash placed between the labia. The throat was sprayed with Dobell's solution. The patient was given food and stimulants freely. Nitromuriatic acid and strychnia were administered.

SUPPURATIVE CHOLECYSTITIS.

Dr. H. B. Anderson read a paper on Suppurative Cholecystitis with rupture of the gall bladder, complicating typhoid fever. The patient, J.S., was admitted to the Toronto General Hospital, September 16. He was able to work at his trade in Detroit till July 6, when he was taken suddenly ill with chills and fever, vomiting and diarrhoea, with acute abdominal pains. Chill occurred daily. He was treated for malaria. He recovered and returned to work again August 1, still feeling miserable. He was taken worse in a few days. Chills, fever, vomiting, diarrhoea, and headache, with a good deal of abdominal pain on the right side, were the principal symptoms. He was again treated for malaria, taking quinine till cinchonism was produced, with no result. He was examined before the Mississippi Valley Medical Association. Malaria was diag-

nosed. Of several other men who were working with him and similarly affected, two had died. The patient came to Toronto, September 16. Was placed under the care of Dr. Davison at the hospital. Dr. Davison being absent, the reader had charge of the case. The malarial parasite was first looked for, but none found. This examination was repeated for several days with a negative result. The blood showed six million red cells; hæmoglobin normal; leucocytosis present, there being an increase of the polynuclear leucocytes. Malaria was thus excluded, and some acute inflammatory process pointed to. The temperature was ranging from normal to 102° . The pulse was soft and of a low tension. The tongue was dry, red, and tremulous; lungs and heart normal; mind clear; abdomen on the right side full and prominent and tense; left abdomen soft and lax. Palpation and percussion produced intense pain on the right side all over the region of the liver in front and behind, and some distance below. It was difficult to define the area of hepatic dullness on this account. There was no pain or tenderness in the right iliac fossa. There was no enlargement of the spleen, and no eruption seen on the body. Urine negative. Erlich's reaction was not tried.

Diagnosis. Probably abscess of the liver. There was no history of gallstones or jaundice. There was swelling beneath the ribs below the ninth intercostal cartilage. On the fifth day after admission the intense pain and swelling disappeared, and the patient felt comparatively better. This was soon followed by general abdominal tenderness. The temperature arose to 103° , but fell to normal on the evening of each day. The pulse became rapid and weak. Involuntary evacuations of urine and fæces took place. Patient grew unconscious, and died on the 26th, eleven days after entering.

Autopsy. General peritonitis, acute, with considerable brownish yellow fluid in the cavity, bile-stained, which contained many polynuclear cells containing yellow pigment. Bacteria in the form of curved rods and rounded ends present. The small intestines were bound together by recent inflammatory adhesions. The solitary glands were swollen, and ulceration present in a few of Peyer's patches. The floors of the ulcers were clean and smooth, and appeared three or four weeks old. The liver weighed four pounds, and showed passive congestion. The cystic duct was obstructed by gallstones. The mucous membrane of the gall-bladder showed ulcerated patches. The tissue between the ulcers was reddened and congested. On the right side of the gall-bladder, one and one-half inches from the margin of the liver, one ulcer had perforated through into the general peritoneal cavity. Externally there were adhesions to the liver by a fibrinous deposit. The gall-bladder was greatly dilated. The spleen weighed six ounces. Cultures from the peritonic fluid showed a rod

bacterium, short, with rounded ends, somewhat constricted in the centre. In places they formed threads. It corresponded to the bacillus typhosus or the bacillus coli communis. An alkaline culture was made; no ingol was found, which proved it was the bacillus typhosus. The doctor referred to the comparative rarity of this complication; to the power of the bacillus typhosus to set up inflammation, and the marked leucocytosis, and to the ease with which malaria was excluded by microscopic examination of the blood.

Dr. Peter's asked if the swelling in the neighborhood of the ribs was apparently due to congestion of the liver, or if it was localized to the neighborhood of the gall-bladder, and how many days before death it was noticed.

Dr. McPhedran asked if the attack in July was not due to gallstone impaction in the cystic duct leading to dilatation of the gall-bladder. He could not see how the bacillus would get up the duct. He thought the infection was more probably hæmatogenous. He asked if the spleen was a typhoid one, and if there were any cultures made from it; if the chills and fever were due to the biliary infection. He was glad attention had been called to the condition of the blood. It was quite remarkable that the red cells and hæmoglobin were normal after so long an illness.

Dr. Peters said that the question of a possible operation had occurred to him; would it be possible in such a case to operate on such a gall-bladder and drain? Of course, the operation would be a very severe one on a patient in so low a condition. If one could diagnose positively the distended condition of the gall-bladder he would probably recommend operation, although there would be great danger attending it. In the case presented there was no mode of escape for the pus from the gall-bladder, and any operation would be incomplete with an attempt to evacuate the duct. He complimented the essayist on the clinical and pathological report of the case.

Dr. Oldright called attention to the great difficulty of knowing what to do in such cases. This had been his experience.

Dr. H. Walker thought an exploratory incision could have done no harm, at any rate; it might have led to a successful issue.

Dr. Anderson said that when the trouble first appeared there was no localized tumor; but about the fourth day the fullness opposite the ninth intercostal cartilage appeared. The tenderness was all over the liver, it was not localized. The swelling in the neighborhood of the gall-bladder was not noticed till later. He thought it was a case for surgical treatment and reported it to the surgical side, but he understood it was considered too late for interference. The spleen was typhoid in character, but no cultures were made from it. There were no marked symptoms of typhoid.

ATROPIA POISONING.

Dr. R. J. Wilson read the report of a case of atropia poisoning. Mrs. C——, aged 24. About noon drank a solution of atropia, containing $1\frac{1}{2}$ grains. Reader saw her with Dr. M—— an hour and a half after taking the solution. She had then been vomiting at intervals for a few minutes, and was drinking hot water. The pupils were widely dilated, pulse 120, respiration 12. Administered $\frac{3}{4}$ grain of morphia hypodermically.

2.15 p.m. Pulse 144, respirations 8, pupils widely dilated, patient delirious. Gave $\frac{3}{4}$ grain of morphia.

3.00 p.m. Pulse 120, respirations 6. No change in the size of the pupils.

4.30 p.m. Pulse 140 and weak, respirations 4, $\frac{1}{4}$ grain of morphia given, and $\frac{1}{4}$ grain of pilocarpine.

5.30 p.m. During the last hour employed artificial respiration with no success. The breathing was stertorous, expiration being prolonged, face livid. The pupils showed slight decrease in size, skin cold, temperature in axilla 97.6° . Injected 5 drachms of brandy and $\frac{1}{4}$ grain pilocarpine.

6.30 p.m. Pulse 120, respirations 5, skin warmer. Administered 2 drachms of brandy, also $\frac{1}{4}$ grain morphia and $\frac{1}{4}$ grain pilocarpine.

7.30 p.m. Pulse 120, stronger, respirations 6, marked decrease in the size of the pupils. Injected $1\frac{1}{2}$ drachms of brandy.

8.00 p.m. Respirations 7, consciousness returned, more color in face.

8.30 p.m. Respirations 8, recognized faces, but could not see small objects distinctly. Had diplopia. Bathed limbs and chest with hot water, and applied hot water bottles to body.

10.00 p.m. Respirations 9, slight perspiration on chest.

11.00 p.m. Pulse 120, respirations 12, perspiring freely. The following day patient could not see to read, but on the second day the vision was quite normal. Recovery was uninterrupted.

Dr. Wilson reported a second case: A little girl, aged 5, had taken a quantity of linimentum belladonna. The child was quite red when he saw it an hour after. The temperature, instead of being subnormal, was abnormally high, being 108° , and after the death of the child it had risen to 110° . Another feature was, the child had tetanic spasms coming on about four hours after she had taken the belladonna.

Dr. Oldright pointed out that the maximum doses in the B. P. were too large. In a prescription he had written he had put down grain $\frac{1}{2}$ of atropia. When he visited the patient next day she had an eruption, the face was flushed and the throat was dry. She did not repeat the dose. He found that the druggist had put in 25m. of solution of atropia, making a 2m. dose, a much larger one than had been ordered, being about $\frac{1}{12}$ of a grain. The dose in the B. P. was 1 to 4m.

The president stated that he had changed in a prescription containing atropia $\frac{1}{10}$ to $\frac{1}{20}$ by writing the 2 heavily over the 1 in the denominator; but the druggist had misconstrued it to mean $\frac{1}{2}$. After taking a dose the patient had a very uncomfortable night. He related two other cases where the patients had taken a quantity of belladonna liniment instead of some other medicine meant for internal use, by mistake. But by the use of morphia and the stomach tube recoveries took place in both cases.

Dr. James McCallum related the case of an old man who was undergoing treatment for his eyes, atropia grain 4 to the ounce being used for eye-drops. He was brought to the hospital in a state of delirium, and it was impossible to tell whether he was suffering from alcoholism, atropine poisoning, or pneumonia. But the following day discovery of the physical sign of pneumonia on one side of the chest revealed what the true condition was.

Dr. Webster reported a case in which an eruption appeared on a young girl who was wearing a belladonna plaster. He had had another case in which $\frac{1}{2}$ grain tablets of belladonna had produced toxic effects. The same dose repeated in pill form had no such effect. He referred to another patient in whom $\frac{1}{10}$ of a minim fluid extract produced a very severe headache and marked dryness of the throat.

The society then adjourned.

Book Reviews.

SAUNDERS' AMERICAN YEAR BOOK OF MEDICINE AND SURGERY, edited by George M. Gould, A.M., M.D., assisted by eminent American physicians and teachers, is in course of preparation, and will be ready for delivery January 1. Mr. Saunders intends to publish this work (in one volume) yearly.

A NEW work under the title of "Consumption : Its Nature, Causes, and Prevention," over 340 pages, with illustrations, is announced, to be soon issued by William Briggs, the Toronto publisher. The author is Edward Playter, M.D., author of Playter's "Physiology and Hygiene" (authorized for teachers), and a number of pamphlets and papers on consumption, and for twenty years editor of the *Canada Health Journal*. He has himself made some special investigations relating to the causes of consumption, and during a practice of over a quarter of a century given special attention to the subject.

The Archives of Pædiatrics will commence its thirteenth year with the January number, under the business management of E. B. Treat, publisher, of New York. *The Archives* has been for twelve years the only journal in the English language devoted exclusively to "diseases of children," and has always maintained a high standard of excellence. The new management propose several important changes in its make-up, increasing the text fifteen per cent., and enlarging its scope in every way. The editorial management will be in the hands of Floyd M. Crandall, M.D., Adjunct Professor of Pædiatrics, New York Polyclinic, and chairman of Section on Pædiatrics, New York Academy of Medicine.

INTRODUCTION TO PATHOLOGY AND MORBID ANATOMY. By T. Henry Green, M.D., F.R.C.P., Physician and Special Lecturer on Clinical Medicine at Charing Cross Hospital, etc. Seventh American from Eighth English Edition. Revised and enlarged by H. Montague Murray, M.D., F.R.C.P., Physician to Out-Patients and Lecturer on Pathology and Morbid Anatomy at Charing Cross Hospital, etc. Illustrated by 224 engravings, Philadelphia : Lea Brothers & Co., 1895. 8vo. Pp. 598. Cloth. \$2.75.

"Green's Pathology" has passed through six American editions, and this, the seventh, comes to us enlarged by new sections added to keep the work abreast of the times. A colored frontispiece, accurately showing the appearance of some of the more common test tube cultures, is an acquisition to the book, while about sixty new engravings have been added to illustrate pathological changes. This work is and always has been a very popular one with

the students—and deservedly so—but the addition of a chapter on the technique of a post-mortem—which might be superfluous in a *system*—would be of great advantage to the student and practitioner alike. It would be a useful guide to him in making an autopsy for an inquest away from the medical centre, when a report would have to be sent to the government. The practitioner finds in this work, concisely put, the change that he should expect to find in certain morbid conditions, and, what is very useful to him, a mention of some of the clinical symptoms by which these changes are preceded. The illustrations, paper, printing, and binding, are up to the high standard of the Lea Brothers & Co.

The following books and pamphlets have been received :

- ANTISEPTIC DRAINAGE IN ABDOMINAL SURGERY. By J. H. Kellogg, Battle Creek.
- A NEW DYNAMOMETER FOR USE IN ANTHROPOMETRY. By J. H. Kellogg, Battle Creek.
- THE NON-SURGICAL TREATMENT OF OVARIAN DISEASES. By J. H. Kellogg, Battle Creek.
- A NEW METHOD OF OPERATING FOR HÆMORRHOIDS. By J. H. Kellogg, Battle Creek.
- THE INFLUENCE OF DRESS IN PRODUCING THE PHYSICAL DECADENCE OF WOMEN. By J. H. Kellogg, M.D., Battle Creek, Mich.
- GRAPHIC METHOD OF RECORDING diseased conditions of the lungs and a new form of pneumograph. By J. H. Kellogg, Battle Creek.
- ANTIPHTHESINE. Report on Professor Klebs' New Tuberculin Derivative and Some of the Cases Treated. By Charles Denison, A.M., M.D., Denver, Col.
- PROCEEDINGS AND ADDRESSES of a Sanitary Convention held at Charlotte, Mich. (supplement to the report of the Michigan State Board of Health for year 1895).
- FAVORABLE RESULTS OF KOCH'S TUBERCULIN TREATMENT IN TUBERCULAR AFFECTION THAT ARE NOT PULMONARY. By Charles Denison, Denver, Col.
- THE CONDITION OF THE CHILDREN'S TEETH OF THE PRESENT DAY ; and the effects of decayed teeth on the health of the children. By J. G. Adams, L.D.S., Toronto.
- THE GRAPHIC STUDY OF ELECTRICAL CURRENTS IN RELATION TO THERAPEUTICS, with special reference to the sinusoidal current. By J. H. Kellogg, M.D., Battle Creek.
- TAYLOR ON VENEREAL DISEASES. The Pathology and Treatment of Venereal Diseases. By Robert W. Taylor, A.M., M.D. Clinical Professor of Venereal Diseases in the College of Physicians and Surgeons, New York. In one very handsome octavo volume of 1002 pages, with 230 engravings

and 7 colored plates. Cloth, \$5.50; leather, \$6.50. Philadelphia: Lea Brothers & Co., Publishers, 1895.

GRAY ON NERVOUS AND MENTAL DISEASES. New (2d) Edition. A Treatise on Nervous and Mental Diseases. By Landon Carter Gray, M.D., Professor of Diseases of the Mind and Nervous System in the New York Polyclinic. In one very handsome octavo volume of 728 pages, with 172 engravings and 3 colored plates. Cloth, \$4.75; leather, \$5.75. Philadelphia: Lea Brothers & Co., Publishers, 1895.

THE DISEASES OF CHILDREN'S TEETH, THEIR PREVENTION AND TREATMENT. A Manual for Medical Practitioners and Students. By R. Denison Pedley, M.R.C.S., L.D.S., Eng.; F.R.C.S., Edin. Dental Surgeon to the Evelina Hospital for Sick Children, Southwark, London. With 470 pages, numerous illustrations. Published in London, Eng. J. P. Segg & Co., Regent Street West, Philadelphia. S. S. White, Dental Mfg. Co.

A MANUAL OF OPERATIVE SURGERY. By Lewis A. Stimson, B.A., M.D., Surgeon to the New York, Bellevue, and Hudson Street Hospitals, Professor of Surgery in the University of the City of New York, etc., and John Rogers, jr., B.A., M.D., Assistant Demonstrator of Anatomy in the College of Physicians and Surgeons, New York, etc. Third edition. 334 illustrations, 12mo., 614 pages. Cloth, \$3.75. Lea Brothers & Co., Philadelphia.

A TREATISE ON NERVOUS AND MENTAL DISEASES. For Students and Practitioners of Medicine. By Landon Carter Gray, A.M., M.D., Professor of Nervous and Mental Diseases in the New York Polyclinic, Visiting Physician to St. Mary's Hospital, Neurologist to the Hospital for Ruptured and Crippled; etc., etc. Second edition, revised and enlarged, 72 illustrations and 3 colored plates. 733 pages. Cloth. Philadelphia: Lea Brothers & Co.

Medical Items.

DR. E. T. KELLAM (Tor., '95) has located in Niagara Falls, Ont.

DR. A. N. HOTSON has removed from Innerkip to St. Marys.

DR. E. T. KELLAM, (Tor., '95) has located at Niagara Falls, Ont.

DR. J. W. EARLY (Tor., '90) has removed from Annan to Owen Sound.

DR. JAMES H. COTTON, of Toronto, has returned from a trip to England.

DR. G. B. SMITH has returned to Toronto after paying a visit to Great Britain.

DR. L. F. BARKER (Tor., '90) has returned to the Johns Hopkins Hospital after six months' study in Germany.

DR. W. W. BREMNER, of Toronto, recently left for foreign lands with the intention of engaging in missionary work.

The State of New York has appropriated \$6,000 a year to the Pasteur Institute, managed by Dr. Paul Gibier.

DR. DON ARMOUR and Dr. C. Parfitt, of last year's resident staff, Toronto General Hospital, are now in London, England.

DR. W. T. WILSON (Tor., '92), of Dundas, has been appointed one of the assistants in the Insane Asylum, Brockville.

DR. C. SHUTTLEWORTH (Trin., '94), son of Professor Shuttleworth, has commenced practice in Broadway avenue, Toronto.

THE new wing of St. Michael's Hospital will be formally opened on Wednesday, November 20, by His Grace Archbishop Walsh.

DR. PERFECT, who practised in Toronto Junction for some years, and left it for a time, has returned to that town and resumed his practice.

DR. EGERTON Y. DAVIS continues to give weekly demonstrations on lesions of the hydatid of Morgagni at his private hospital, Caughnawaga, Quebec.

DR. JAMES M. MCCALLUM has lately returned from England and resumed practice at 13 Bloor street west, where he will devote himself to the special practice of the eye, ear, nose, and throat.

DR. THOS. B. FUTCHER (Tor., '93) has been appointed one of the Instructors in Medicine in the Johns Hopkins Hospital, and will take charge of Professor Osler's clinical laboratory at the hospital.

DR. W. J. MCCOLLUM (Tor., '94) has commenced practice at 166 Jarvis street, where his mother has resided since the death of his father, Dr. J. H. McCollum, who also lived for some years in the same house.

DR. T. S. CULLEN (Tor., '90) has been appointed Instructor in Gynæcology in Johns Hopkins Hospital. Dr. Cullen recently passed through Toronto on his way to London, Ontario, where certain members of his family are ill.

DR. INGERSOLL OLMSTED (Tor., '87), for some years Medical Superintendent of the Hamilton City Hospital, has returned to Canada, after spending a year in post-graduate work in the hospitals of London, Berlin, and Heidelberg.

THE will of M. Pasteur, according to Paris papers, reads as follows: "This is my testament. I leave to my wife all that the law allows me to leave her. May my children never depart from the path of duty, and always have for their mother that love which she deserves."

AT Venice, when any one dies, it is the custom to fix a placard on the front of the dead person's house, as well as in the neighboring streets, as a sort of public notice, stating his name, age, place of birth, and the illness of which he died, affirming also that he received the holy sacraments, died a good Christian, and requesting the prayers of the faithful.

A FLORIDA LAW.—"Any person or persons who shall falsely or maliciously disseminate or spread rumors or reports concerning the existence of any infectious or contagious disease shall be guilty of a misdemeanor, and, upon conviction, shall be punished by a fine in a sum of not less than \$100 nor more than \$1000, or be imprisoned in the county jail for not less than three nor more than six months."

THE eighth annual meeting of the Southern Surgical and Gynæcological Association was held in Washington, November 12, 13, and 14, 1885. There were thirty-seven papers announced, including those from the following surgeons: Dr. Tiffany, Baltimore (president); Dr. Vander Veer, Albany; Dr. McFadden Gaston, Atlanta, Ga.; Dr. Joseph Price, Philadelphia; Dr. Howard Kelly, Baltimore; Dr. Taber Johnson, Washington; Dr. George H. Rohé Catonsville, Md.; Drs. J. D. S. Davis and W. E. B. Davis (secretary), Birmingham, Ala.; Dr. John A. Wyeth, New York; Dr. L. S. McMurtry, Louisville, Ky.; Dr. Henry O. Marcy, Boston, and many other prominent surgeons, especially from the South.

ST. JOSEPH'S HOSPITAL.—St. Joseph's Hospital, Guelph, a new structure built at a cost of \$30,000, exclusive of furnishings, was formally opened October 15, 1895. After an inspection of the building, about 200 sat down to lunch. In looking over the happy speeches delivered after the repast, as reported in the *Guelph Daily Herald*, we learn from Dr. Chamberlain, Inspector of Charitable Institutions, that this fine structure is a monument to the energy and liberality of Bishop Dowling. Hon. J. M. Gibson and Dr. Herod spoke kindly of the noble and unselfish work done by the Sisters of St. Joseph. Dr. Howitt pronounced the new hospital one of the best institutions of the kind on the continent, being well adapted for both medical and surgical work in accordance with modern ideas.

THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS.

The American Association of Obstetricians and Gynæcologists held one of its most interesting and satisfactory meetings at Chicago, September 24, 25, and

26, 1895. The attendance of members was large. Numerous papers were read relating to obstetrics, gynæcology, and abdominal surgery, and the discussions, as usual in this association, were spirited, forceful, and instructive.

The president, Dr. J. Henry Carstens, of Detroit, administered the affairs of the association with great discretion, facilitating the transaction of the large amount of business before it with thoroughness and despatch.

The following named were elected officers for the ensuing year : President, Dr. Joseph Price, of Philadelphia ; vice-presidents, Drs. Albert Hawes Cordier, of Kansas City, and George Sherman Peck, of Youngstown, Ohio ; secretary, Dr. William Warren Potter, of Buffalo ; treasurer, Dr. Xavier Oswald Werder, of Pittsburg ; executive council, Drs. Charles A. L. Reed, of Cincinnati ; James F. W. Ross, of Toronto ; Albert Vander Veer, of Albany ; Lewis S. McMurtry, of Louisville ; and J. Henry Carstens, of Detroit. Seventeen new Fellows were also elected.

The ninth annual meeting was appointed to be held in Richmond, Va., Tuesday, Wednesday, and Thursday, September, 15, 16, and 17, 1896. Resolutions of thanks were passed as follows : First, to Dr. J. B. Murphy, chairman of the Committee of Arrangements, for the efficient manner in which he had provided for the comfort of the Fellows during the meeting and for the delightful yacht sail tendered the Fellows and guests of the association ; second, to the Chicago Gynæcological Society, for many courtesies tendered ; and, third, to Messrs. Breslin and Southgate, proprietors of the Auditorium hotel, for the free use of a splendid parlor in which the meeting was held, and for courteous attention to the Fellows who were guests in the house.—*Buffalo Medical Journal*.

MEDICAL EXAMINATIONS.

The following candidates have passed the primary examination of the College of Physicians and Surgeons of Ontario, September, 1895 :

J. F. Argue, Carp, Ont.
 Catharine Bradshaw, Toronto.
 R. B. Boucher, Peterborough.
 C. W. Bouck, Inkerman.
 H. A. Beatty, Toronto.
 A. A. Beatty, Toronto.
 J. T. Clarke, Foxboro.
 A. Davidson, Burns.
 G. R. Deacon, Stratford.
 F. B. Elliott, Mayfair.
 A. Gun, Durham.
 J. A. C. Grant, Gravenhurst.
 J. E. Klotz, Ottawa.
 T. A. McCormack, Harrow.
 J. C. McGuire, Trenton.
 J. F. McConnell, J. A. Sutherland, Toronto.
 W. D. Sharpe, London.
 W. D. Wiley, Dresden.

The following candidates have passed the final examination of the College of Physicians and Surgeons of Ontario, September, 1895 :

R. B. Boucher, Peterborough.
 C. W. Bouck, Inkerman.
 A. Davidson, Burns.
 A. Downing, Toronto.
 A. Gun, Durham.
 J. A. C. Grant, Gravenhurst.
 L. Hogg, London.
 T. W. Jeffs, Queensboro'.
 C. N. Laurie, Coboconk.
 Eleanor G. Lennox, Toronto.
 L. Lawrason, Dundas.
 H. W. Millar, Orillia.
 D. W. McPherson, Toronto.
 R. T. Noble, Norval.
 H. C. Pearson, Demorestville.
 M. B. Smith, Glanford.
 W. D. Sharpe, London.
 R. W. Shaw, Lotus.
 C. L. Stammers, Toronto.
 D. S. Sager, Brantford.
 E. A. White, Toronto.
 A. S. Wade, St. Lambert, P.Q.
 W. D. Wiley, Dresden.

OBITUARY.

DR. RICHARD ARDAGH CALLAGHAN.—Dr. Callaghan, after passing his final examination in 1872, commenced practice in Thornton, Simcoe county, where he remained for about twenty-one years. In 1893 he moved to Barrie, where he lived up to the time of his sudden death, which took place in his office October 21.

JAMES REA, M.D.—We have to announce with deep regret the death of Dr. James Rea, which occurred at his late residence, corner of Dundas street and Dovercourt road, Toronto, November 17. He developed tuberculosis in or before 1894, and, as a consequence, spent a part of last winter in California. He derived much benefit from his stay in the warmer climate, and on his return was able to do his ordinary work. On the day of his death he attended to his patients as usual and paid a number of visits. In the evening he was suddenly seized with a hæmorrhage, and died in a few minutes. He received his education in the Toronto School of Medicine, and graduated in Victoria University in 1886. He was attached to Field Hospital Corps No. 2, and served during the Rebellion of 1885. He was most assiduous in his duties, and rendered excellent service. He received the Saskatchewan medal. Soon after this he commenced practice in Toronto, and soon attained success. He was highly respected both by his patients and his brother physicians. He was 34 years of age, and left a widow and two young children.

THE CANADIAN PRACTITIONER

EDITOR:

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Original Communications.

CHAIRMAN'S ADDRESS.*

MR. B. G. CONNOLLY.

YOUR HONOR, guests, members of the Faculty, and fellow-students :
In opening this, the ninth annual dinner of the Medical Faculty in the University of Toronto, it affords me the greatest pleasure to extend, on behalf of the faculty and students, to our guests this evening a hearty welcome, and I earnestly trust and desire that you will enjoy our hospitality to the utmost. This is the one evening of the year when it is our privilege to have with us and to unitedly entertain those to whom we are in many ways indebted; but I must confess that our entertainment is not without the alloy of selfishness, as we are looking forward with no small degree of pleasure and anticipation to the addresses which are to follow.

Among those who grace our halls to-night are representatives of Church and State, of Bench and Bar, of the professor's chair and the practitioner

* Delivered at the banquet of the Medical Faculty of the University of Toronto, December 5, 1895.

in harness, of the press, the medical associations of our county, and of sister institutions, from all of which members shall, in due order, be called to address you, assured of a cordial hearing whether the speaker stands clothed with scholarship and experience or has only to recommend him youth and its aspirations. Our dinner to-night has more than its ordinary significance, for, although our announcement shows this to be our ninth dinner—and rightly so, referring to our reorganization—yet in reality we to-night attain our majority, as this is our twenty-first gathering as a medical educational body. Dr. Graham, in replying to one of the toasts a couple of years ago, gave a pleasing sketch of the growth of banquets of this kind, as he was at the first, which was held in the Walker House twenty-one years ago. It is very appropriate, that Dr. McPhedran who took an active part, as an undergraduate, in organizing our first dinner—in fact, the first of the kind in Canada—should occupy the chair of honorary president on this occasion, as he does to-night. It is usual to celebrate important events in individual life by rejoicing; and so with us—we want everything to bespeak the joy we feel. We want music and song and good cheer to reign. We invite the freest speech, and we trust all will enter in with spirit to make our evening characteristic of our college life, where well-ordered freedom prevails, and the pleasing intercourse of teacher and student marks our daily labor, governed only by the dictates of courtesy and respect.

It has been customary, at these our annual gatherings, for the one who occupies the position I now fill to outline briefly, as far as concerns us, the progress of the year, and happily there is much that might occupy my attention: for at no time in the history of our faculty has more valuable work been done; at no time has the opportunities which it offers to students been greater; and never has the high standing of our university received more deserved recognition abroad. However, with some of these matters all are familiar, and others will be treated by distinguished speakers who are to follow; so they call, in my remarks, for the merest mention.

A year has passed since last we assembled here, and, though quick its flight, it bears the marks of progress and of change. A brilliant class has left us, and we have been joined by one of promise. The class of which I am a member has taken another step towards assuming the responsibilities of those who practise medicine. The results of the efforts of our students at the various examinations have been satisfactory, indeed, while on the field of athletic sports ours has been a march of triumph. The completion of the new chemical laboratory, the opening of the museum in connection with the biological building, and the increased facilities for study provided in the "old school," all bear marked evidence to the

progress of our *alma mater*, and the generosity of those to whom is entrusted its management. No single feature for the year affords a more pleasing topic for reference than the course of lectures now in progress on the history of medicine, in which will be traced the growth and development of our art from the earliest times, when it stood surrounded by the mists of empiricism and superstition, from which it slowly emerged and advanced through varying vicissitudes, until it now stands firmly planted on the rock of science.

It is pleasing because there is an inexpressible charm in the lives of the good, brave men whose only objects have been to relieve pain and save life ; and while in the annals of medicine there have been those who preferred self-glorification to honesty, and were prepared to sacrifice every principle to attain it, yet history teems with accounts of those who, by years of labor, by close observation, and by patient research, have reduced medicine to science, and placed it in a position to defy the attacks of faction and command the respect of all.

The history of medicine—medicine in its widest sense, as referring to the study of causation and prevention of disease, its treatment, and the alleviation of human suffering—affords a further pleasure in showing the immense strides which have been taken in advance, more particularly in the last half century. Among those, in later years, who have done much for medicine, no name stands more prominently forward than that of the late illustrious Louis Pasteur, whose death was mourned by the world, and whose remains were accorded by his sorrowing countrymen a funeral befitting his position of prince among men. Although not a member of our profession himself, we profit by his work, and to him be all credit given. No elements of chance assisted him in his labors. He had fixed principles for a guide, and successes such as few men know were his, as, one by one, the knotty questions that he attacked yielded to his piercing scrutiny. Whilst he enriched science by his many discoveries, yet the most important legacy he has left us is the inspiration of his name and the example of his life, wherein is illustrated the wonders which persistent, intelligent, well-directed efforts will accomplish.

From our profession nature yet holds many problems unsolved, many secrets undiscovered. The future is full of possibilities. What share of the harvest will be reaped by the graduates of the University of Toronto it is not easy now to say, but conversant as I am with the training and opportunities which she offers them as students, and knowing the distinguished work some of her graduates have already done, I may be pardoned for predicting that theirs will be a goodly part. Our esteemed professor of physiology paid a solid tribute to our graduates in his address last year when he predicted that, in time to come, our faculty, as occasion demanded,

would be increased and recruited from her own graduates. Such can only be considered as a step in the right direction—a true encouragement to merit. Our best men should be kept at home, and to their alma mater should belong the credit of their labors. We all hope for the time when there will be provided some institute of research where those whose tastes lie in that direction will be allowed to pursue, under proper supervision, the work of their choice. The endowment of such an institution by the government would be in the public interest. It is generally admitted now that when the cause of disease is clearly known, the effect can be more easily removed, or, better still, prevented. The medicine of the future is preventive. Knowing this, it becomes our duty to teach it, and when we who are now students go out into practice, to lose no opportunity of educating public opinion as to the necessity of an institute such as that to which I have referred. I think if such an institute were properly launched, the character of the work done would be its best appeal for support and the extension of its usefulness. Something of the kind, encouraging original investigation along the lines of physiology, physiological chemistry, biology, pathology, and bacteriology, must greatly increase the knowledge we now possess, and which has done so much in the way of preventing disease and led to the hope that in years not far distant many of the diseases now so prevalent will be known only as curiosities. Sufficient illustration of what has been done is seen in the improved treatment of diphtheria, and in the fact that septicæmia is all but wiped out by the advent of the use of antiseptics.

That disease will ever be completely wiped out is beyond the hope of the most sanguine; but if through the efforts of the profession in introducing good sanitary precautions, by the advocacy of correct habits of living, and by the successful treatment of disease, the average of life is lengthened to any appreciable extent and human suffering lessened, then it has not worked in vain.

It is not only along the lines of research and investigation in the sciences which lie at the bottom of medicine, and which present such a fascinating field, that improvement has been made, but also in applying the knowledge thus acquired, supplemented by the not less interesting nor less important information obtained at the bedside.

It is only by comparison with the past that we can properly appreciate all that has been done. Where once new growths could only be grouped according to gross appearance, we have now the microscope to assist in rightly classifying them and to indicate proper treatment. An early removal thus suggested may often be the means of saving life. The stethoscope enables us to detect and describe pathological conditions of lung and heart almost to a certainty where once our knowledge was based

only on conjecture. The laryngoscope brings the trachea into view, and the ophthalmoscope gives accurate information of the inmost recesses of the eye. Thus with the various instruments of precision to assist his trained touch and his knowledge of disease, the skilled doctor of to day can diagnose the different pathological cases with readiness and certainty.

Treatment has kept pace with advance of other branches of our knowledge, and has reached a happy climax when the very germs that lie at the bottom of disease can be harnessed into producing a substance which tends to their own obliteration. The introduction of anæsthetics has greatly enlarged the field of the surgeon, and antiseptic methods lessened much of the danger of operation, so that now he may fearlessly treat the most delicate structures with the scalpel with the greatest advantage to the patient.

All this history teaches, and more, and while with the past we have nought to do, save to gather inspiration for the future, yet it must assist very much the student of to-day to appreciate his glorious heritage in the accumulated knowledge he finds to his hand, and in the varied field which spreads before him, affording employment for the highest mental faculties.

The first allegiance of the doctor is to his professional pursuits, and to those who, placing confidence in his skill, employ him. For these he must labor night and day. He must stand the repository of secrets the most sacred ; he must be the trusted adviser in disease, the sympathetic friend who will allay pain, ward off danger, sooth apprehension, and infuse hope. In all this his greatest reward is the approval and friendship of those who know best his work and in the satisfaction of useful work well done. But in a growing country such as ours his duties do not end there. He must bear his share in assisting and moulding her progress. Trusted as he is, he can do much to encourage education, foster love of country and loyalty to her institutions, and just appreciation of her advantages. In this the unwritten history of a thousand places shows how well he does his part.

The practice of medicine dates back more than two thousand years and will go on to the end of time. It will be ever popular because ever a necessity, and while, as new light directs, new methods may be introduced and treatment changed, yet the object of medicine remains the same, and common experience goes to show that in its practice he approaches nearest to success who works in accordance with loyalty to his country, justice to his neighbor, whether practitioner or patient, and justice to himself.

THE OPERATIVE TREATMENT OF TUBERCULAR GLANDS.*

BY A. PRIMROSE, M.B., C.M. EDIN., M.R.C.S., ENG.

Surgeon to the Hospital for Sick Children, Toronto and the out-door department, Toronto General Hospital; Associate Professor of Anatomy in the University of Toronto.

THE object of my paper is to indicate the technique which should be observed in the treatment of tubercular glands by excision. Tubercular adenitis is so common that every practitioner is familiar with the clinical phenomena presented by the disease. Formerly the lymphatic glands thus affected were subjected to what we may term expectant treatment, local or constitutional, and it is only comparatively recently that the radical procedure of excision has been adopted extensively. Excision was formerly advocated in exceptional cases only, *e.g.*, where tumors of considerable size had formed, causing deformity or pressure symptoms; or, again, operation was resorted to in cases in which suppuration had supervened and an abscess demanded incision and drainage. The question of "operative *versus* expectant treatment" has been discussed in connection with these glandular affections just as extensively as a similar question has been discussed with regard to other tubercular conditions, notably of the bones and joints. The same arguments for and against operative interference are advanced respecting the treatment of these lymphatic glands as are put forward concerning tubercular arthritis. The fact is proven in both cases that tubercular processes may become quiescent, and their activity may cease. It is equally true that in both cases the disease may run a rapid course, and may even prove destructive to life or limb.

I do not propose in this paper to discuss the question of appropriate treatment in the broader sense, but I wish to state emphatically my conviction that if active local measures are to be adopted nothing short of excision should be attempted. British surgeons seem to be of one opinion on this point; thus I may refer you to the discussion on "The treatment of enlarged cervical glands" at the meeting of the British Medical Association at Newcastle, in 1893. The discussion was opened by Mr. Clifford Allbutt and Mr. Teale, and was taken part in by Messrs. W.

*Read before the Simcoe District Medical Society.

Knight Treves, Godlee, Howard Marsh, Noble Smith, and others. It is noteworthy in that discussion that Mr. Howard Marsh, who is such a strong advocate of expectant treatment in tubercular arthritis, strongly recommended surgical interference by operation in tubercular adenitis. Dr. T. Barlow, in summing up the points brought out at that meeting, referred to the fact that the only difference of opinion, expressed during the discussion, was that concerning the technique of the operation : it was clear that the drug treatment of tuberculous glands was at a discount : drugs, he said, were of use for improving the general nutrition, but had little demonstrable effect on masses of caseous material.*

It is self-evident that the field of operative procedure in the treatment of enlarged lymphatic glands is restricted to those localities in which the glands are accessible. Thus the cervical glands may readily be removed. I have also removed axillary and inguinal glands, and glands from the pelvic region along the iliac vessels. Glands, however, of the chest and abdominal cavities are rarely within the possible field of operation. For instance, the bronchial glands, the mesenteric, and retroperitoneal glands cannot be successfully attacked. It is true that occasionally an abscess may develop, say, in the retroperitoneal region, in consequence of infection lodged in the group of glands there situated : such an abscess may be opened and the principles of treatment, which I am about to advocate, may be applied there as in more superficial parts. The locality, however, which is most frequently attacked by the surgeon in these cases is the neck region ; probably the cervical glands are more frequently infected by tubercle than any other group : this is the opinion one would form from clinical observation. We are not surprised that such should be the case, because infection may here occur so readily from the mouth cavity and the upper air passages. These glands are more exposed to irritation than any other group ; they have more work to do in removing irritative and infective material, absorbed from the mucous and cutaneous surfaces than any other group of glands. Hence these cervical glands, because of the increased functional activity, are often the seat of inflammatory processes, and tubercular inflammation is very commonly the result of infective absorption.

The etiology, therefore, of tubercular adenitis is readily understood. It may briefly be stated to be due to peripheral irritation of skin or mucous membrane, more frequently the latter. Thus the tubercular infective material may be absorbed by the lymphatics of the nose or mouth, and, passing along the lymphatics, this is lodged in the glands towards which the different lymphatics run. The gland in its functional activity has been compared to a filter, removing from the lymph stream particles which

would flow on into the blood were it not for the interposition of the gland. The glands of the cervical group which are most frequently affected are those which receive their afferent lymphatics from the nose and mouth region ; this is what we would expect, from the fact that the tubercle bacillus is so frequently found in the buccal and nasal cavities. Lastly, we must note the fact that slight abrasions of the surface are very common in these cavities, and under such circumstances of peripheral irritation infective absorption is much more apt to occur.

In connection with the etiology of the disease, it is worth noting the fact that tubercular infection may be produced by direct inoculation. The following case appears to be an example of inoculation by vaccination. L.C., æt. 10, was admitted under my care in the Hospital for Sick Children, with the history that she had been vaccinated six months previously. The vaccination was done over the left deltoid muscle, and the ulcer which resulted never healed. One month after vaccination a discharge occurred from the right ear : immediately after this a lump formed in front of the left ear, then another on the right side of the neck ; three weeks subsequently a lump in the left axilla. On admission sinuses were discharging from the right side of the neck and from the left axilla. The right ear was discharging stinking pus. There was a hard swelling immediately above Poupart's ligament on each side. The vaccination marks were represented as raised oval patches, the larger one about $1\frac{1}{2}$ inches long, and $\frac{3}{4}$ inch broad. The posterior one was slightly smaller. The surfaces of the patches were granular in appearance after the encrustation present on them was removed. The skin in the immediate vicinity was healthy in appearance.

I excised the patches freely, and removed and scraped away as much of the unhealthy glandular and cicatricial material in the neck and axilla as possible. On microscopic examination of the glands, I found typical tubercles, with large numbers of giant cells. I could not discover any giant cells in the vaccination patches, but groups and columns of epithelioid cells were abundant. The case seemed to me to be one in which inoculation of the bacillus tuberculosis had been caused at the time of vaccination.

The course of the disease varies. It may be acute or chronic. I may here narrate briefly the history of a well-marked type of the acute process. A child, $4\frac{1}{2}$ years of age, was admitted under my care in the Hospital for Sick Children on the 28th of August, 1893. A few days previously the child had been playing on the street, and came home complaining that he had been run over. The mother could, however, find no evidence of injury. On the following morning, he complained of pain in his leg, and, on examination, a lump was discovered in the left groin

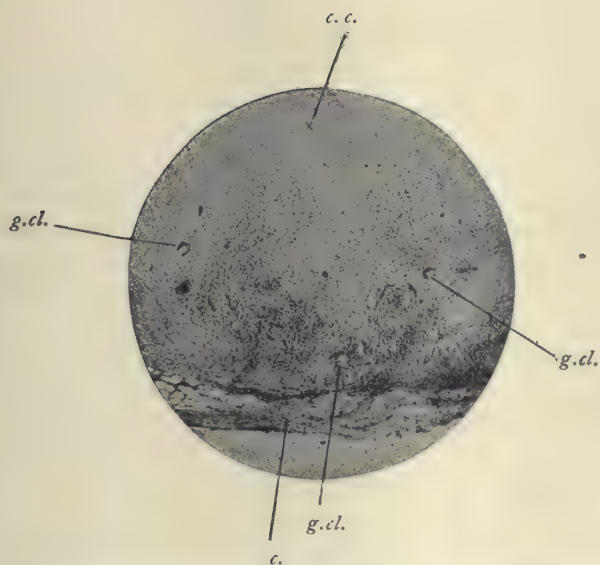


PHOTO-MICROGRAPH OF A SECTION OF A TUBERCULAR
GLAND REMOVED FROM THE INGUINAL REGION
OF A CHILD IN THE CHILDREN'S HOSPITAL
X 30.

c. c. Caseous centre.

c. Capsule (thickened).

g. cl. Giant cells, showing the typical horse-shoe arrangement of their nuclei.

Electric oil was rubbed into the part for three days, but no good resulted. The lump got harder and increased in size, and he was brought to the hospital. The child had previously been strong and healthy. There was no history of consumption in the family. During four days in the hospital, previous to operation, the lump increased appreciably in size, and the temperature varied from 101° to 104° . At the time of operation a large, irregular mass existed in the left groin, immediately below Poupart's ligament; this was removed by a vertical incision, and proved to be composed of a mass of enlarged glands of the superficial femoral group. Another mass was found about Poupart's ligament, and, by means of an incision through the abdominal wall, parallel to and above Poupart's ligament, three large glands were removed from the region of the iliac vessels. The wounds were both flushed with 1-40 carbolic acid lotion and packed with iodoform gauze. The temperature fell after the operation, and the wounds healed readily.

The glands were examined microscopically, and were found to contain typical tubercles. The case is of considerable interest from the fact that, although the process was very acute, yet there was absolutely no suppuration. The tubercular process is a non-suppurative process; the bacillus tuberculosis is non-pyogenic, and when pus does occur, as it not infrequently does, it is due to mixed infection. Usually some pyogenic cocci have found their way, by absorption from the periphery, to the glands in which tubercular infection has occurred, and they there find a suitable nidus for their growth and development.

Another child, $2\frac{1}{2}$ years of age, came under my care, in whom the glands of the left groin had been similarly affected, in consequence of an injury received five weeks previously. I removed the horizontal group of left inguinal glands. In connection with these a small abscess had developed. In this case the wound was closed by suture, and healing occurred by first intention. The glands, under the microscope, were found to contain numerous giant cells and epithelioid cells, and the bacillus tuberculosis was demonstrated. These cases are good examples of acute tubercular adenitis. The chronic variety of the disease is more common, and is familiar to every practitioner.

Thus in the cervical group of glands we find small masses which tend to increase in size. At first they are freely moveable, and they remain so for a varying period. Often we find glands as large as a walnut, which move readily on an manipulation in the deeper tissues. As the disease advances they tend to become fixed in consequence of the development of inflammation in the periglandular tissue, and an abscess may develop in the gland, or more frequently in the inflamed tissue round about the gland. These abscesses burrow and eventually point on the surface, and, if left to

themselves, open spontaneously ; the discharge continues for a time, until nature has got rid, by this means, of the infective material and the necrotic debris, and eventually healing takes place, leaving usually an unsightly scar.

We may now consider the pathology of tubercular glands. The gross pathological appearances vary greatly, ovoid masses varying in size, the consistence much firmer than the normal gland. At times the enlarged gland becomes softened, and this softening does not appear to bear any definite ratio to the size attained. Thus I could show you glands which I have removed from the neck an inch and a half long, in which no softening has taken place, while, on the other hand, glands of very much smaller size may be soft and caseous. Suppuration in connection with tubercular glands is the exception, for the reason which I have stated. When a gland becomes tuberculous there is always an attendant process of inflammation of a low, non-specific type, surrounding the infected area. This remark applies to all tubercular processes, glandular or otherwise. It appears to be in this neighboring area of inflammation that pyogenic microbes are apt to lodge. Pus may form within the gland capsule, round about the tubercular focus, or, what is more common, it forms without the capsule in the tissues, which have become involved in a periadenitis. The gland may become wholly destroyed in the suppurative process, so that occasionally no trace of the glandular tissue is recognizable. The caseous material found in a gland is simply necrotic debris. The periadenoid inflammation may lead to other complications than suppuration ; the surrounding tissues are implicated and the inflammatory material may organize, and the gland thus becomes firmly adherent to the surrounding parts. Lastly, the gland capsule itself becomes thickened during the progress of the disease.

The histological characters also supply certain indications for treatment. If a thin section exhibits a mottled appearance if held up to the light, this is due to collections of epithelioid cells, and I believe the appearance is very suggestive of the presence of the tubercular process. Compare with this the condition found in lymphadenoma, and you will see that in the latter case there is a uniformity in the section and the mottling is absent. Under the microscope one may detect little else than caseous debris in cases of long standing, but if examined carefully, one is pretty sure to find, under the capsule, collections of epithelioid cells. I show you a micro-photograph of a section of a gland under the lens, which gives you a picture of the condition commonly found.

The centre of the gland is caseous, the capsule is thickened, and between the capsule and the caseous centre is gland tissue in which the tubercular process is actively going on. I have nothing to

say with regard to the caseous centre or the thickened capsule, but the part immediately within the capsule deserves special attention. Here we have an active process going on, or at all events we have here the portion of the gland in which active disease is apt to be lighted up when stimulated to do so. This area of activity (or it may be in a quiescent state) possesses certain characteristic appearances under the microscope. Thus we may find collections of the so-called typical tubercles. Each tubercle is composed of a central giant cell, with its many nuclei frequently arranged in a horse-shoe shape near portions of the periphery of the cell. Surrounding the giant cell is a zone of epithelioid cells, and surrounding these another zone of round cells (leucocytes), or instead of the "typical tubercle" we may have the condition described by Watson Cheyne, in connection with tubercular bone disease, as "tubercular infiltration," in which we have collections of epithelioid cells, often arranged in groups or columns, with leucocytes surrounding these. Lastly, bacilli may be demonstrated by appropriate methods. The bacillus tuberculosis is usually found in the giant cell, occupying a position in groups towards the centre of the cell, away from the nuclei. The bacilli, however, are to be found also in the epithelioid cells, and it is now held that they are more constantly present in the epithelioid cell than in the giant cell. From this circumstance, Mr. Watson Cheyne was led to assert that he looked upon the epithelioid cell as the characteristic element of the tubercular process.*

Treatment. The principles to be observed in treating tubercular glands by excision are simple. It is none the less important that they should be rigidly observed. The suggestions I make are based upon a careful study of the pathological conditions found and upon my experience in the operative treatment of these cases.

We must endeavor to perform our operation in such manner that we leave an aseptic wound. We are dealing with a septic process, and therefore the use of suitable antiseptics is indicated. Carbolic acid is probably the best form of antiseptic available for our purpose. The operation should be performed with strict observance of the principles of antiseptic surgery as enunciated by Lister. I need not detain you with the details. Our efforts must be directed towards ridding the tissues of the infective material and preventing infection of the open wound during the process.

The incision should be made so as to expose the gland by a clean cut, with as little bruising of the tissues as possible. The line of the incision, when on exposed surfaces, should be determined so as to leave as little noticeable scar as possible. Thus in the neck one may often be able to make the incision along certain natural creases or furrows in the skin and

**British Medical Journal*, 1889, Vol. II., p. 1228.

the linear cicatrix which results can hardly be discovered. I am not an advocate, however, of making the superficial incision at a remote point and dissecting up the tissues until the gland is reached. This method has been recommended in the neck in order to avoid the appearance of a scar on the exposed portion of the neck; the connective tissue is opened up very extensively and a very large subcutaneous wound made, through which infection may readily occur over a wide area. I believe this to be an exceedingly dangerous procedure.

When the gland is reached and exposed it is best removed by a clean dissection. When early attacked the gland may be dislodged by enucleating it with the finger nail, but if there have been any strong adhesions formed to the surrounding parts these are best divided by means of knife and dissecting forceps. Occasionally the gland is so matted to the surrounding tissue that it cannot be defined; the only method of proceeding in such cases is to scrape out the central caseous mass and remove by scraping, and possibly by aid of the dissecting forceps and scissors, as much of the gland and capsule as can be thus detached. If an abscess exists, its relation to the gland must be made out. It will not do to simply open the abscess and drain; we must remove the cause of the suppuration here as in the other cases of pus formation. Evacuate the contents, then scrape the walls thoroughly, then hunt for the gland, and not infrequently we will find the gland outside the abscess wall, and communicating possibly with the cavity by a small opening. I was able to demonstrate this to my class of students a short time ago when, after opening a tubercular abscess in the neck, and thoroughly scraping and cleansing it, I found on careful examination a gland about the size of a hazel nut lying outside the abscess wall, and communicating with the abscess cavity by a small flask-like opening. The condition was, of course, due to the fact that the abscess had developed, not in the gland, but in the tissue round about it, and the gland formed practically part of the abscess wall.

The use of lint or gauze, introduced on a pair of pressure forceps, will be found very useful to swab out the cavity of an abscess or of a caseous gland; the caseous detritus may thus be removed very efficiently. After thus thoroughly cleansing the cavity, further caution is required in order to secure a good result. We must remember that the pus and the caseous material may be entirely removed, and yet the actively tubercular tissue *immediately under the capsule* may be left. We have removed it as far as possible by scraping, but a further safeguard should be employed, and this is best done by the use of pure carbolic acid. This may be introduced on a little piece of absorbent wool held in a dressing-forceps, and the interior of the cavity thoroughly swabbed with it. After such treatment, if we feel confident that we have an aseptic wound, we may unite by

suture, and in many such cases I have had healing by first intention. If there is doubt, however, it is best to pack the wound cavity with iodoform gauze, and allow it to granulate. We use iodoform in preference to other antiseptic packing, because iodoform seems to be particularly beneficial in destroying the tubercular process. Occasionally we have cases in which we do not require to pack, and yet, in consequence of the extent of the wound, the opening up of connective tissue, and the oozing, it is wise to insert a drainage tube for a few hours.

Sometimes the adhesions about a gland in dangerous regions are so extensive that we are unable to remove it. Important structures may be implicated in the adhesions, and we are forced to leave the gland. This condition is, however, rarely such that we are compelled to abandon the gland without removal. On one occasion, in assisting Mr. Cameron in the removal of glands deeply situated in the posterior triangle, we found the phrenic nerve so firmly united to the gland that we were compelled to leave the gland in place: slight traction of the gland caused spasmodic contraction of the diaphragm. Often a gland is adherent firmly to the superficial parts, and yet may readily be stripped off its deeper connections. I have dissected such glands off the internal jugular vein, baring that vessel without damaging it, for a considerable distance.

Lastly, let me say one word with regard to the treatment of cicatricial tissue and sinuses in long-standing cases. This tissue is often the seat of tubercular infiltration, and should be carefully and thoroughly removed. Many of these cases run a prolonged course because the infected material which is here referred to is not excised. So-called hypertrophic scars are often of this nature; they are the seat of tubercular infiltration, and require radical measures for their removal.

With regard to the danger to life of the operation of excision, I may quote from the large experience of Mr. Knight Treves, who states that he has operated on a few hundred cases and has never had a death.

I believe that in the future more of these cases will be subjected to the operation of excision than in the past. Practitioners are beginning to realize the fact that palliative measures tend to make matters worse. I believe nevertheless that Mr. Thoms, of Birmingham, is correct when he states* that "physicians are much inclined to persevere with local remedies, which often cause a chronic cellulitis and make the subsequent removal much more difficult."

* *British Medical Journal*, Vol. II. 93, p. 1, 143.

TUBAL PREGNANCY DIAGNOSED BEFORE RUPTURE.
CÆLIOTOMY AND RECOVERY.*

BY. W. R. NICHOLS, M.D.,

BADEN.

WHEN that fearless pioneer in abdominal surgery, Mr. Lawson Tait, in 1883, had the courage of his convictions to remove a tubal pregnancy, it was not simply an abdomen that he opened—it was a new and victorious field on which he placed the surgeon's beneficent standard. As a consequence of the impetus given to the study of the subject by his work and teaching, cases at this date, fairly numerous, have been reported from every civilized country where women have been rescued at the brink of the grave and restored to society as its most useful members. Our own country has furnished its quota in the hands of Howitt, McKinnon, Ross, Temple, Smith, and others.

It had long been supposed that the condition of ectopic pregnancy was exceedingly rare ; but in a series of 3,500 general autopsies made by Dr. Formad, of Philadelphia, there were found not less than thirty-five cases, or one per cent. ! Surely frequent enough to put every thoughtful physician on the alert.

As a practical subject, it can never become devoid of interest. The difficulties of diagnosis even after rupture, the suddenness of the symptoms during apparent excellent health, the immediate and imminent danger to life, and the absolute necessity for a capital operation to give even a chance for life—all combine to render the subject of profound interest and importance to the general practitioner, as well as to the surgeon and gynecologist.

In regard to the diagnosis before rupture, the symptoms are generally so mild that the patient does not seek relief from her physician ; and if she does, these symptoms are not differentiated from those that belong to minor ailments. On this point Mr. Tait says : "The strangest thing to me is that in the enormous experience I have now had in tubal pregnancy (thirty-nine cases in 1889), I have never but once been called upon

* Read before the Toronto Medical Society, Nov. 5, 1895.

to make an examination until rupture occurred, and in that case there was neither history nor symptoms which enabled me to do more than determine there was *tubal occlusion*. Under these circumstances, I think I may be excused for maintaining a somewhat sceptical attitude towards those gentlemen who speak so confidently of making a certain diagnosis before rupture." And Mr. J. Bland Sutton, in his work on "Surgical Diseases of Ovaries and Fallopian Tubes," 1893, the most recent and valuable work on the subject, states that he is acquainted with but one instance of diagnosis before rupture, which was made by Dr. Herman, senior obstetric physician to the London Hospital.

History.—Mrs. T., æt. 37. German, parents living and healthy. Had nine brothers and sisters, of whom five died in infancy from "teething"; those living are healthy. Menstruated first in fourteenth year, and continued regularly thereafter, unless physiologically suppressed.

Married at 21. Has had 11 living children, and one miscarriage at 4½ months. Two children died in infancy, remainder healthy. After second confinement had "inflammation." Attending physician thought an abscess would form on left side in inguinal region, but it passed away, leaving, however, more or less tenderness ever since. Ten years ago cough, expectoration, and hæmoptysis occurred; patient remained poorly a few years, but improvement set in slowly, and she has not been troubled for four years to any serious extent.

May 24, 1894, was delivered of a strong, healthy child; everything normal; made rapid recovery.

June 2, 1895, had a miscarriage at 4½ months. Membranes enveloping child at birth; rapid recovery; had some sanguineous discharge for week or two, but no chill, headache, or fever. It was patient's habit to menstruate soon after delivery, whether nursing child or not. She was, accordingly, unwell on July 12, again on August 11, but had no further show until washing on Sept. 15, when she was taken with a sudden and severe pain in the lower part of abdomen, on left side and back, accompanied by a gush of clear fluid, one to two ounces in quantity, from the vagina. She felt quite weak and faint for an hour or two, but was free from marked pain or discharge until the 20th, when another severe pain was experienced, followed immediately by a hæmorrhage, simulating menstruation, until the 26th, when it gradually lessened so as to disappear by Oct. 3. Patient felt so well that she went away on a trip for twelve days, during which time occasional losses occurred, but no membranous shreds were found at any time.

Was called in on Sept. 15. Found patient fairly well nourished, but somewhat anæmic. An examination of heart, kidneys, and skin showed them to be normal in condition and function. Upper lobe of right lung

consolidated (arrested phthisis). Temperature and respiration normal. Pulse, 90.

A bimanual examination of the pelvic organs revealed a uterus only slightly enlarged, with a cervix but little softened, and a fulness rather than a distinct mass on left side of uterus; no special tenderness; no collapse or signs of hæmorrhage internally. Patient could not say whether she was pregnant or not, as she was not usually troubled with morning sickness, etc. Was ordered to rest in bed, and to send for me if any further unpleasant symptoms happened before my next visit. Two examinations between the 20th and 30th enabled me to make out a distinct tumor occupying the left Fallopian tube; felt circumscribed to the touch, but had no inflammatory tenderness in it. Some pulsation could be felt in the vault of the vagina immediately beneath; no fluctuation could be elicited. A distinct sulcus between it and the uterus could be made out, both above and beneath. The ovary was also detected external and posterior to it. At the first examination a strong suspicion of the condition arose; at the next two I was satisfied with the diagnosis, and was about making a final examination before announcing it, when the patient, feeling so well, and wishing to avail herself of an interdicted excursion, suddenly took French leave as the surest way of attaining it. On her return on the 17th an examination was again made, which only confirmed my previous opinion.

To account for the first severe pain, and its accompanying loss of clear fluid (which was not blood), it was necessary to consider the following as probable sources, viz.: Rupture of amnion in uterus (abortion); rupture of amnion in Fallopian tube (tubal pregnancy); hydrosalpinx, hydrops, metrorrhœa intermittens, and hydatiform mole. In regard to the tumor it had to be differentiated from hydrosalpinx, hæmatocele, hæmatoma, pyosalpinx, ovarian tubal and broad ligament cysts and tumors, dermoid tumor, malignant disease and fibroid, the difficulty being relatively greatest in the first enumerated. In arriving at a diagnosis the above conditions were satisfactorily excluded, and due regard was paid to the following points: The tube had been crippled before, leaving it in a favorable condition, as Tait says, to arrest the ovule; it was not patient's habit to have menstruation delayed—it meant impregnation; the tumor had enlarged to an appreciable extent during observation in a limited time.

The diagnosis having been communicated, and the treatment and risks pointed out, I asked the family to satisfy themselves in the opinion by calling in whomsoever they desired. Dr. Bingham, of Waterloo, was accordingly called, and concurred fully in the opinion expressed.

As nine small children were in the home of limited room, I had the patient at once carefully removed to St Joseph's Hospital, Guelph, that

she might get the benefit of the care and nursing that her case demanded. With the assistance of Drs. Robinson and Orton, I opened the abdomen in the middle line, passed the finger into the site of the tumor located in the Fallopian tube, elicited fluctuation and tension almost to bursting, and, much to my concern, found dense, firm adhesions to bowels, pelvic and lower abdominal wall. These were the legacy of the attack of "inflammation" of a dozen years previous. They were separated, tied off, and cut through, as required, with the usual difficulty. During the process, severe hæmorrhage welled up from the bottom of the pelvis, but a diminution of the tension of the tumor announced its source. The bleeding part was clamped, and the enucleation proceeded with until sufficiently freed to be tied and cut off. As a considerable hæmorrhage persisted after removal, the field of enucleation was packed with hot sponges, for a few minutes, to arrest capillary oozing. On their removal, however, the bleeding was observed to be active and arterial. It became necessary, therefore, to search out the pedicle and reapply ligatures, which had the desired effect. The condition of the patient forbade any attention to the other tube. The abdomen was irrigated and sponged out, closed, with drainage, and dressings applied. Recovery was uneventful and patient returned home a distance of twenty-seven miles, in two weeks and five days after section.

At time of removal, tumor appeared to be like a short, moderately sized sausage, dark and purple in color. In the interior both fluid and firm lamellated blood was found, also a distinct membrane formation, viz., amnion and chorion, which had undergone detachment from the epithelium of the tube. The tube wall at places was so much attenuated that it appeared ready to burst on slight pressure. That I have been able to restore this mother to the bosom of her home, and save those nine little children from a fate that was mine in early life, has been due, in no small degree, to the ability and painstaking care of Drs. Robinson and Orton, the former of whom conducted the after-treatment for me, and to the efficient nursing of the good and devoted Sisters of St. Joseph.

It may be well to make some observations on the case not treated of previously. Looking back on that attack of inflammation following her second confinement, I think we may be justified in considering it to have been a septic salpingitis, with more or less pelvic peritonitis, which gave rise to the adhesions. If pus formed to any extent in the tube it likely drained out into the uterus, as many cases do; or, if the infection were short of this intensity, it would give rise to desquamation of cilia and epithelia, thickenings, kinking, strictures, and adhesions. It is conceivable that the arrest of the ovule could be brought about by any one or more of these conditions, or even by an interference of the peristalsis of the tube. As to what precisely happened on Sept. 15th, when the severe pain

and gush of fluid occurred, I think we can pretty closely determine : an intra-tubal hæmorrhage, owing to the insecure attachment of the chorionic villi, explains the symptoms quite satisfactorily. The tube being patent at the uterine extremity, the amniotic sac, ruptured from the advancing pressure (of the hæmorrhage), and its contents were expelled. From this time no further development of membranes and ovum would occur. The second attack of severe pain was caused by a recurrence of intratubal hæmorrhage, and the history up to date of operation was that such was still going on. The indication for operation was, therefore, absolute, and the attenuated condition of the tube wall shows that it was performed none too early. Had the patient survived several months longer without the diagnosis being established, I am not so certain that the indications would be so urgent for removal. Her condition as well as the behaviour of the tube would determine that. The case also illustrates quite forcibly that we can never be sure of the existence or characters of adhesions until section, and what may appear to be an inconsiderable operation may prove on opening the abdomen to be most formidable.

Selected Articles.

TRANSLATIONS FROM THE FRENCH.

BY WALTER McKEOWN, B.A., M.D., M.R.C.S., ENG.

COFFEE IN STRANGULATED HERNIA AND INTESTINAL OBSTRUCTION.

Guérin (*Archives de Médecine*) recommends an infusion of 250 grammes of coffee in 12 cups of boiling water, a cupful to be taken every quarter of an hour, the last four cupfuls at intervals of half an hour. The author cites cases of his own in which this proved successful. Reduction will never be delayed more than four hours. When coffee cannot be given by the stomach it may be given by the rectum, or subcutaneous injection of caffeine may be used.

NEW METHOD OF ADMINISTERING CHLOROFORM.

Preferring in general chloroform to ether, M. Rosenberg finds that the accidents due to chloroform are to be attributed to the manner of administering and not to the drug itself. As every one knows, the danger of chloroform anæsthetic is the arrest of the heart, or of the respiration. Both, he contends, are brought about reflexly by the irritating action of the chloroform upon the terminations of trigeminus distributed to the mucous membrane of the nose. The same reflex can be produced by any other anæsthetic taken through the nose. To obviate this he first renders the mucous membrane of the nose anæsthetic by the use of cocaine, which in itself is an antidote to chloroform. As a result of his experience of this method in fifty cases he concludes as follows :

(1) The commencement of anæsthesia is less disagreeable for the patient who never makes defensive movements.

(2) The excitement stage is often wanting, and is always slight except in the case of alcoholics.

(3) During anæsthesia it is very rarely a patient vomits, and if vomiting does occur there is little retching.

(4) Upon awakening the patient experiences no disagreeable sensation, and is not haunted by the smell of chloroform or ether.

The following is his routine practice : A few minutes before the general anæsthesia the patient is directed to blow the nose strongly so as to clear the mucous membrane of mucus, and, leaning forward or sitting (never lying down), is directed to snuff into each nostril a centigramme of a powder consisting of some inert substance and 10 per cent. of cocaine hydrochlorate. This is repeated in about three minutes, and general anæsthesia is commenced. If the operation be prolonged the insufflation is repeated at intervals of half an hour. It is also repeated when operation is over, as it causes patient to waken up more rapidly. As to the mode of administering the chloroform itself, the author is strongly in favor of the continuous administration drop by drop.—*Gazette des Hôpitaux, from Berlin Kl. Woch., 1895, No. 10.*

CARBONATE OF COBALT AS A TEST FOR FREE HYDROCHLORIC ACID IN THE GASTRIC JUICE.

Kuratkowski suggests the above as offering the most delicate test for the presence of free hydrochloric acid. He uses the salt freshly prepared, and the test is based upon the fact that free hydrochloric acid, acting upon the carbonate and producing the chloride of cobalt, gives a color reaction, the change being from rose color to blue. He has tried for this reaction with carbonate of cobalt, in the presence of chlorides of mercury of sodium, the per chloride of iron and chloride of ammonium, but always with negative results. Neither lactic acid, butyric acetic peptones, nor acid phosphate of soda, will give this color change. As to its delicacy, the author asserts that it will detect one part in (10) ten million of free hydrochloric acid, which means that it is 500 times more delicate than the phloroglucin vanillin test.

The advantage claimed in addition to its wonderful delicacy is that it is impossible to confound it with any other reaction. The disadvantages are that for each examination it is necessary to prepare fresh cobalt carbonate, and the comparative slowness of the reaction.—*Gazette des Hôpitaux.*

TREATMENT OF HÆMORRHOIDS.

Prof. Roux, notwithstanding the general preference for cutting operations, speaks highly of the following treatment of piles : The patient is placed in the lithotomy position and the two thumbs introduced into the rectum. The thumbs are made to perform semi-circular movements, and separated until they come, by dilatation of the rectum, in contact with the ischium. The piles are thus brought plainly into view. He then takes a hypodermic syringe filled with a fifty per cent. to eighty per cent. solution of carbolyzed glycerine and injects into each pile two drops of the solution.

The base of the pile should be held between the thumb and index finger, and the needle entered near the anus and pushed through to the base of pile, instead of going directly through the mucous membrane. The object of this is to prevent bleeding, which is, however, only slight. Prof. Roux thinks that the dilatation is principally responsible for the good results, and that the injections are only of secondary importance.—*L'Union Médicale*.

GUAIACOL AS A LOCAL ANÆSTHETIC.

M. Championnière reports (*Gazette des Hôpitaux*) a series of experiments lately made by M. Andro, a Paris physician, on the use of guaiacol as a local anæsthetic. M. Andro, as the result of an accident, received a very painful scald. It occurred to him that guaiacol, like other members of the phenol group, possessed anæsthetic properties, and he accordingly made an ointment containing it for the purpose of applying it to the burn. He was astonished at the relief of pain produced, and determined to try the effect of it subcutaneously. As a result of his experiments he affirms that it will produce effects absolutely identical with those obtained from the use of cocaine.

DIGITALIS AND ITS ALKALOIDS.

M. Franck has made a report to the Paris Academy of Medicine upon the action of digitalis and different digitalins upon the heart. As a result of his experiments he concludes that digitalis acts equally upon the two hearts, and not more strongly on the right heart, as contended by M. Snor on the left, as the English contend. He also states that an infusion of the leaves of digitalis will produce a more marked action upon the heart than a corresponding dose of digitalin.—*Gazette des Hôpitaux*.

ALCOHOLISM AND ITS PROPHYLAXIS.

The Paris Academy of Medicine has been discussing a great deal during the past summer the subject of alcoholism and its prophylaxis. Elaborate experiments have been made upon animals to prove the poisonous effects of alcohol. This seems to vary with the source of the alcohol, whether from brandy, wine, beer, etc. Also, when injected directly into the blood, its toxic effects are much more marked than when taken by the stomach, comparatively small doses producing death in rabbits when injected subcutaneously. The only conclusion apparently arrived at is, that the old-fashioned way of taking alcohol cannot be improved upon. There will be general agreement with this conclusion.

TWINS AND HEREDITY.

M. Danvin expresses the opinion that the tendency to twin birth is confined to certain families. Göhlert has furnished proofs of it by statis-

tics. Speyr has given special study to the same question and confirms the statement. It is known that, on an average, there is one twin birth in eighty.

The hereditary tendency to the production of twins is transmitted not only by the twins, but also by the brothers and sisters of the twins.

A difficult thing to explain is that this heredity is transmitted in just about the same proportion by the father as the mother. The feeble vitality of twins is shown by the figures of Gœhlert—only thirty-six per cent. reach the age of twenty. Male twins appear more delicate than female, the average life of the former being seven years and seven months and of the latter ten years. Twins appear to be possessed of feeble powers of procreation, there being one-half more barren unions where one of the parties is a twin than to the average. Speyr shows, finally, that triplets and quadruplets occur nearly always in families which have already produced twins. Miscarriages occur twice as frequently in twin pregnancy.—*Lyon Medical*, August 25, 1895.

PROLONGED RETENTION OF A LIVING FŒTUS BETWEEN THE MEMBRANES
AND WALL OF UTERUS.

A young woman whose menses had ceased June 10, 1894, accidentally plunged a long pin into her abdomen five months afterwards. The pin was drawn out without difficulty; but a little while afterwards the waters began to run away and she had an almost continuous bloody oozing. This was thought to be due to a metritis, caused by the penetration of the pin.

A month afterwards the fœtus was expelled. It was then found that the rent in the membranes was exceedingly small, scarcely large enough to pass a five franc piece through, and that the sack itself was very small. It was plain that as a result of the accident the fœtus had passed through the membranes, and had continued to develop between them and the uterine wall.—*Lyon Medical*, Sept. 1, 1895.

SOME THERAPEUTIC (SURGICAL) NOTES.

BY ROSWELL PARK, A.M., M.D.,

Professor of Surgery, University of Buffalo.

BUFFALO, N.Y.

A NEW EXPEDIENT FOR DEALING WITH TOUGH AND INTRACTABLE STRICTURES OF THE URETHRA.

I HAVE recently had to deal with a long-recurring, exceedingly dense, and tough cicatricial contraction of the urethra through which, after tedious effort, I succeeded in passing a filiform whalebone-bougie. Over this, as a guide, I endeavored to pass a variety of urethral instruments, but could coax nothing in the shape of a metallic instrument through the dense tissue. I then opened the deep urethra by perineal section, having the fine whalebone as a guide. Over the slightly bulbous extremity of this filiform bougie I tied tightly a piece of fine, braided silk. Withdrawing this through the urethra in a forward direction, I pulled through with it the silk, which I then proceeded to utilize as a fine chain saw, in the same way that Abbe has succeeded in attacking œsophageal strictures. With the fingers of one hand in the deep perineal opening, and with the other hand free outside, I could pull the silk backward and forward. Using it in this way as a very fine chain-saw, I succeeded in enlarging the canal. After repeated efforts the stricture was divided to a degree permitting a threading of the silk through the eye of a tunneled urethrotome, which was at last passed down through the urethra, its blade separated, and the obstruction divided without further difficulty.

I am quite well aware that the necessity will very rarely arise for adopting this expedient. Indeed, this is the only time that I have ever failed in passing a metallic instrument over a whalebone, when once it had been made to find the passage. Possibly in this instance further manoeuvring would have enabled me to adhere to former practices. So soon, however, as this expedient suggested itself, and was tried, I found that I saved time and accomplished my purpose more speedily, and, consequently, more easily for the patient, than I had feared was possible. The patient's recovery in this instance was uneventful.

A NEW AND IDEAL STYPTIC: A NEW COMPOUND OF ANTIPYRIN AND TANNIC ACID.

In the *Medical News* of December 15 and 22, 1894, I rehearsed some of my experiences with antipyrin as a styptic in surgical practice, stating that I had for years used a 5 per cent. solution as a spray, sterilizing the water before making the solution. This I had no hesitation in spraying upon any surface, peritoneal, cerebral, or other, from which parenchymatous oozing was taking place to an extent complicating the operation or jeopardizing the success of an ideal dressing. This therapeutic note attracted at least sufficient attention to lead to its pretty general use by surgeons in various parts of the country, from many of whom I have heard commendatory remarks, and from none of whom have I ever heard of disappointment in its use. The present note is to corroborate the favorable esteem in which I have long held this procedure, and to state that I have since resorted to it more widely and more generally for styptic purposes. Thus, I have no hesitation in using it in the urethra, or even in the bladder, in cases of hematuria proceeding from either of these locations. Even in the eye it may be used without fear, preceding its use by that of weak solution of cocaine, though in this location the antipyrin solutions need not be made so strong. On the other hand, it may be used in much larger percentage when the 5 per cent. solution fails to accomplish the purpose; even when small vessels spurt, compression for a few moments with iodoform gauze or acetanilid gauze sopped in this solution will often be effective.

As every physician will realize, there occur cases of bleeding—for instance, from the nasal cavity or from divided bone—in which even these solutions will be ineffective. My present object is to call attention to the combination of antipyrin and tannic acid, in solution, by which there is precipitated an intensely agglutinative and cohesive substance of, to me, unknown chemic composition, which offers the most ideal styptic for certain purposes that I have ever dreamed of. This combination I hit upon by accident and first resorted to in a case of apparently intractable hæmorrhage from removal of adenoid tissue in the vault of the pharynx, in which I was called in consultation by my colleague, Dr. Hinkel. He happened to have at hand a bottle of alcoholic solution of tannin, while I was provided with antipyrin in powder. The case being emergent, I suggested the combination of the two styptics, and added the dry powder to the solution. To our surprise, there was formed at once a gummy mass, at first flocculent, which quickly cohered, the result being a combination the stickiness and adhesiveness of which quite astonished us. A small sponge dipped into the fluid containing this material in suspension was inserted into the postnasal space, and hæmorrhage was instantly checked, not to again recur.

I have since experimented with these materials, and have found that they may be united in almost any proportion with the formation of the gummy mass, and would suggest that the substances be mixed in proportion to the emergency of the case, and to the desire for little or much of the resulting compound. It is possible by adding strong solutions, or by pouring the powder of one into the solution of the other, to precipitate so much of the agglutinative composition as to make a gum that may be placed about the margin of the bleeding bone—for instance, in operations upon the cranium. Or a small piece of sponge or cotton sopped in this material may be forced into a tooth-socket, or in various other ways its use may be made to result in benefit and satisfaction. There is but one attendant difficulty : that is, it is so remarkably cohesive that when the time comes for detachment or separation of the tampon it is difficult to remove it. It may be even necessary to wait for sufficient time for the formation of granulation and separation by natural processes.

I strongly commend to surgeons experimentation with these solutions, and their own determination as to the strength in which it may be best to use them.

MORE WITH REGARD TO MUSTARD AS AN ANTISEPTIC.

In the same issue of the *Medical News* to which I have referred, I endeavored to call attention to the remarkably efficient properties possessed by mustard as an antiseptic or sterilizing agent for the surgeon's hands, and for the skin of the part to be operated upon. One never goes into a house, or at least a locality, in which mustard cannot be easily procured, and my custom is to thoroughly rub and scrub my hands with a mixture of green or other soap, corn-meal, and mustard-flower, using this for about five minutes. After rubbing it thoroughly into all the crevices and creases of the hands and nails by aid of a nail-brush, one may be absolutely certain that his hands are sterilized, no matter what he may have been doing previously. I have no hesitation in proceeding from an autopsy to the operating-room, if I may thus protect my hands. Used as indicated, the mustard leaves no unpleasant sensation ; and one may feel that by the time it produces unpleasant tingling or rubefaction of the skin its essential oil has done its desired work as an antiseptic. I have discarded all other means of preparing the hands, and in several years' use of mustard in this way have never been disappointed, nor had the slightest reason to question its effectiveness. I might add also that it is an admirable deodorizing agent, and will take away from the hands all offensive odor of dead or dying tissues, all redolence of iodoform, etc.—*Medical News*.

GEORGE CHEYNE, F.R.S.

DR. CHEYNE was a London physician of considerable eminence and singular character. He was born of a good Scotch family in 1671.

His youthful education was liberal, as young Cheyne was intended by his worthy parents for the church, but their plans being changed, he was placed under the care of the celebrated Dr. Pitcairn, who directed his medical education, and received the degree of "Doctor of Physic."

He is said to have been a very hard student, and to have passed his youth in close application and great abstemiousness. After receiving his medical degree, he removed to London when about thirty years old, and then changed his whole manner of living, partly from inclination and partly from a view to promote his practice. He passed much of his time in free sociability of the young gentlemen of the period, with whom he became "good bottle companions." He soon found that the former temperate and sedate Scottish youth could not keep up the good cheer to which he was treating his unaccustomed system. He began to grow obese, and with the plethora came shortness of breath and extreme exhaustion on the slightest exercise.

His size became enormous, and is said to have reached the enormous weight of 448 pounds.

He abandoned his convivial living, removed to Bath, confined himself to a milk diet, took regular exercise, which reduced his excessive corpulence, and restored his health so that he could ride many miles daily on horseback and attend to a large clientage at Bath in the summer and in London during the winter months. He lived to a mature period, for he died at Bath in his seventy-second year.

Impressed with the value of the treatment he had adopted, he wrote a book urging all people afflicted with chronic maladies to imitate him and try the effects of temperance. At that period most London physicians were, notwithstanding their precepts in favor of moderation, quite given to enjoying the pleasures of the table. Many of them warmly resented Cheyne's endeavors to bring "good living" into disrepute.

Possibly they thought he attacked their interests not less than reflected on their habits, for Dryden wrote :

"The first physicians of debauch were made,
Excess began, and sloth sustained the trade."

A Dr. Wynter arose to dispose of Cheyne in a summary fashion. Wynter had two good reasons for hating Cheyne. Wynter was an Englishman and loved wine, Cheyne was a Scotchman and loved milk.

DR. WYNTER TO DR. CHEYNE.

"Tell me from whom, fat-headed Scot,
Thou didst thy system learn ;
From Hippocrate thou hadst it not,
Nor Celsus, nor Pitcairn.

"Suppose we own that milk is good,
And say the same of grass ;
The one for babes is only food,
The other for an ass.

"Doctor, one new prescription try,
(A friend's advice forgive),
Eat grass, reduce thyself and die,
Thy patients then may live."

Cheyne responded, with more wit and more good manners, as follows :

DR. CHEYNE TO DR. WYNTER.

"My system, doctor, is my own,
No tutor I pretend ;
My blunders hurt myself alone,
But yours your dearest Friend.*

"Were you to milk and straw confined,
Thrice happy might you be ;
Perhaps you might regain your mind,
And from your wit be free.

"I can't your kind prescription try,
But heartily forgive ;
'Tis natural you should wish me die,
That you yourself may live."

Cheyne and a gentleman named Tantley were the stoutest men in Somersetshire. One day, after dinner, the former asked the latter what he was thinking about. "I was thinking," answered Tantley, "how it will be possible to get either you or me into the grave after we die."

Cheyne retorted : "Six or eight stout fellows will do the business for me, but you must be taken at twice."

While Cheyne was the leading physician at Bath, he had many a tilt with Beau Nash, the dictator of the pump room. Once when Nash called the doctor in to prescribe for him, the doctor asked on his next visit if his patient had followed the prescription, when the Beau languidly replied :

* Friend was claimed by Dr. Wynter as his Preceptor.

"No, faith, doctor, I haven't followed it. 'Pon honor, if I had I should have broken my neck, for I threw it out of my bed-room window."

A lady whose fondness for generous living had given her a flushed face and carbuncled nose consulted Dr. Cheyne. Upon surveying herself in the glass she exclaimed, "Where in the name of wonder, doctor, did I get such a nose as this?" "Out of the decanter," replied the doctor.

A patient accompanied by Beau Nash visited Dr. Cheyne for the purpose of ascertaining the cause of a slight abdominal swelling. On examining the patient, the doctor pronounced the swelling to be occasioned by a collection of water, and that it would be necessary that he be tapped. "It cannot be water," said the patient, "It may be wine." "No, no, my good fellow," said Nash, "if it had been wine you would have long before this have tapped it yourself."

Cheyne was a fellow of the College of Physicians at Edinburgh and of the Royal Society.

He was author of the following :

"An Essay on Health and Long Life."

"Tractatus de Infirmorum Sanitate tuenda, Vitaque, producenda," etc.

"An Essay of the true Nature and due Treatment of treating the gout, together with the nature and quality of the Bath Waters, the manner of using them, and the diseases in which they are proper," etc.

"A new theory of acute and slow continued fevers."

"Philosophical Principles of Religion, natural and revealed."

"Fluxionum Methodus inversa: sive Quantitatum fluentium Leges generaliores."

"The English Malady; or a treatise of Nervous Diseases of all Kinds, in three parts."—*J. H. Hunt, in Brooklyn Medical Journal.*

THE ST. JOHN'S AMBULANCE ASSOCIATION.

HIS HONOR THE LIEUTENANT-GOVERNOR OF ONTARIO presided at a meeting held at the Military Institute, November 25, to consider the formation of a branch of the St. John's Ambulance Association for the Province of Ontario. Amongst those present were: Lieut.-Col. Otter, D.A.G.; Lieut.-Cols. Mason, Hamilton, and Davidson; Lieut.-Col. Macdonald, Guelph; Major Mead, Commander Law, Dr. Meyers, Dr. Elliott, Dr. King, Dr. Chas. O'Reilly, Dr. Stuart, and Dr. Ryerson.

This society is the Ambulance Department of the Order of St. John of Jerusalem in England, which has its headquarters at St. John's Gate, Clerkenwell, which is now all that remains of the ancient priory of the order, built in 1504, and recently restored. This order is a revival and a continuation of the old Hospitaller Order of Rhodes and Malta. Its history has been an eventful one, both in England and abroad. It was suppressed in England at the time of the Reformation as a Roman Catholic fraternity, and at Malta when Napoleon took possession of the island. In England, however, it was never annihilated; for after the suppression referred to its members continued in communication with the headquarters at Malta, and, passing through many vicissitudes, continued without state recognition as a fraternity devoted to hospital and charitable work. In 1888 Queen Victoria granted a Royal charter of incorporation, and graciously became its sovereign head and patron, the Prince of Wales at the same time taking the place of Grand Prior. Among the many services which the order has rendered to the public is the establishment of an ambulance society, which has now been formed here. Since the inception of this association in 1877 upwards of 300,000 certificates of proficiency have been awarded, hundreds of detached classes have been formed, one among the police in this city, and over 300 "centres" established. It is spread over the entire Empire, having branches in Australia, South Africa, West Indies, Madras, Bombay, Ceylon, Hong Kong, New Zealand, and at Halifax. Its objects are: The instruction of persons in rendering first aid in cases of accident or sudden illness, and in the transport of the sick and wounded in peace or in war; instruction in the elementary principles and practice of nursing, also of ventilation and sanita-

tion ; the formation of ambulance depots in mines, factories, and railroads ; the organization of ambulance, nursing, and invalid transport corps ; and generally the promotion of works for the relief of the sick and injured in peace and war, independently of class, nationality, and denomination. It should be distinctly understood that its object is not to rival, but to aid, medical men, and with a view of qualifying pupils to adopt such measures as may be advantageous pending the doctor's arrival or during the intervals of his visits. Some idea of its necessity may be learned by the statement that in London alone in ten years 28,071 were injured in the streets, and in England and Wales there are annually lost 2,000 to 3,000 lives by drowning, and in the mines over 1,000.

It was decided to form local centres through the province, as the opportunity may arise, and a local centre will be formed in Toronto at an early date. The formation of these centres is being promoted by Dr. Ryerson, Deputy Surgeon-General, an honorary associate of the Order of St. John. Classes of not more than thirty persons are to be formed, to whom a course of lectures are to be delivered by one of the lecturers of the association. At the conclusion of the course an examination will be held, upon passing which certificates of proficiency will be issued to those entitled to them. On no account will mixed classes be permitted, nor will a lecturer be allowed to examine his own class, so that the certificates may be awarded as an evidence of knowledge apart from any influence which may affect the lecturer.

The following officers were elected: President, his Honor the Lieutenant-Governor; vice-presidents and members of Council, Sir James Grant, K.C.M.G., Ottawa; Senator Gowan, C.M.G., Barrie; Judge Weller, Peterborough; Sheriff Murton, Hamilton; Rev. Canon Richardson, London; Lieut.-Col. Macdonald, Guelph; H. Corby, M.P., Belleville; Judge Hughes, St. Thomas; Dr. R. T. Walken, Q.C., Kingston; Wm. Mulock, M.P., Toronto; Surgeon-General Bergin, M.P., Cornwall; Henry Cawthra, Toronto; W. R. Brock, Toronto; Medical Director, Deputy Surgeon-General G. S. Ryerson, M.L.A., Toronto; lecturers and examiners, Drs. Strange, Grasett, E. E. King, Stuart, Dame, Nattress, Elliott, Myers, W. H. B. Aikens, and O'Reilly; assistant secretary-treasurer, Dr. Campbell Meyers.

Progress of Medicine.

THERAPEUTICS

IN CHARGE OF

GRAHAM CHAMBERS, B.A., M.B. Tor.,

Professor of Analytical Chemistry and Toxicology, Ontario College of Pharmacy ; Lecturer
in Organic Chemistry and Toxicology, Woman's Medical College ;

AND

WILLIAM LEHMANN, M.B. Tor.,

Physician to the Home for Incurables and House of Providence.

VALUE OF CHLORAL.

It is unfortunate this drug has been so distinctly labelled "hypnotic and sedative," as this action has thrown into the shade the marked power possessed of relaxing spasmodically contracted unstriated muscles and dilating peripheral vessels. These qualities suggest the employment of chloral hydrate in several conditions where hitherto it has been little thought of. Associated with iodide of potassium it is of service in bronchial asthma ; and Doctor J. Pal has used it in the form of enemata (fifteen to twenty grains in each) for checking hæmoptysis ; here it is assumed to act by the revulsion which it produces in dilating the cutaneous vessels. On the same principle, it is employed by Doctor Cherchevsky, in small doses daily, to counteract the coldness of the feet and hands which is so disagreeable a symptom in certain cases of anæmia, neurasthenia, etc. ; he also employs its vaso-dilator function in the treatment of aortic aneurism, where even a dose of two or three grains combined with iodide of potassium assists the action of the latter and keeps up a certain degree of peripheral vascular relaxation.—*The Practitioner* (London).

BAD EFFECTS OF THE TOO FREQUENT STERILIZATION OF THE MURPHY BUTTON.

Dr. Frank Jacob, in *The North American Practitioner*, having recently had the opportunity of using Dr. Murphy's button in an end-to-end anastomosis, and having also had the opportunity of viewing the button *in situ post mortem*, he noticed that the two bowls of the button were not in close enough apposition. The cause of this was due to the weakening of the

spring of the button, as a result of many sterilizations ; as in preparing for a laparotomy he always has a button put in with the other instruments. He would suggest the following to make the button aseptic, in place of sterilization : The button first to be thoroughly washed with soap and water, then boiled in a soda solution, then immersed in a ninety-five-per-cent. carbolic solution for an hour, and kept in alcohol until the time of operation, when, before it is placed *in situ*, it should be rinsed in plain sterilized water.

DEATH FROM ROUX'S SERUM.

At a recent meeting of the Société Médicale des Hôpitaux, M. Mozare read notes of a case in which death resulted from injections of Roux's serum. In the case referred to, the child was not attacked by diphtheria. Other members commented on the serious disturbance which they had observed to follow injections of anti-diphtheric serum. Paralysis had occurred in some cases, also cerebral trouble and diminished urinary secretion, but all the children thus affected were cured. Guinon and Roufflange were the first to report a case of death from injection of serum. —*British Medical Journal*, July 27, 1895.

PAINFUL fissures of the nipples have, for some time past, been treated by the application of cocaine, either in the form of an ointment or a liniment. It has been found, however, that when thus employed the secretion of the milk is diminished, and the erection of the nipple prevented. These objections have led Dr. Joire, of Lille, to use cocaine with the direct object of checking the secretion of milk when necessary. He recommends a solution of one grain of cocaine in ten grains of water and ten grams of glycerine, and he advises that this should be used as a lotion to the nipple five or six times a day. He explains the arrest of secretion by the anæsthesia of the nipple which results.—*The Lancet*.

OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

Professor of Obstetrics in the University of Toronto; Obstetrician to
the Toronto General Hospital.

ASSISTED BY

H. CRAWFORD SCADDING, M.D.,

Physician to Victoria Hospital for Sick Children.

EXCORIATIONS AND FISSURES OF THE NIPPLES.

Dr. Charles Jewitt, in a paper on Preventive Treatment of Mastitis, speaks as follows on the treatment of cracked nipples (*Brooklyn Medical Journal*):

Excoriations and fissures heal in most cases under proper and timely antiseptic treatment. An ointment of equal parts of subnitrate of bismuth and castor oil may be used, as advised by Hirst. The ointment should be frequently sterilized by heat. Before applying, the parts are disinfected. A valuable agent for the latter purpose is the hydrogen dioxide.

Pain during nursing may be relieved to some extent by penciling the nipple five or ten minutes before the child is put to the breast with one to five per cent. cocaine solution. The solution ought to be heated to the sterilizing point shortly before using. A one or two per cent. carbolic lotion applied in the same manner is sometimes useful as an anæsthetic. The addition of one-tenth its volume of glycerine prolongs the action of the lotion and keeps the skin soft.

Deep and painful fissures may be treated with a solid stick of nitrate of silver. The entire raw surface should be touched. The lips of the fissures being well separated, the caustic point is drawn slowly through it. Care must be taken that no excess of moisture is present, otherwise the dissolved silver salt may trickle over the surrounding surfaces and healthy structures be injured. A serious objection to this treatment is the exquisite pain it causes. This may be in a great measure prevented by first benumbing the part with a four per cent. cocaine solution. After the application of the caustic the nipple may be covered with a piece of lint, well wet with the anæsthetic lotion. The affected nipple should be rested, if possible, for twenty-four hours or more. Instead of the solid stick, repeated applications of an aqueous solution of the nitrate of silver may be

preferred. In the strength of one or two per cent. it causes little pain and frequently does good service.

In excoriations and fissures that are not too sensitive and do not bleed readily, the nipple shield may be tried. It protects the nipple from the friction, and to some extent from the maceration of suckling. Unfortunately for this method, the child as well as the mother has to be consulted, and the substitute is not always accepted. If artificial nipples are used, it is important that they be rendered aseptic by boiling for five minutes in water immediately before using and not handled with unclean fingers. Similar protection to the nipple lesions is afforded, though in a less degree, by coating the affected surfaces with a pellicle of compound tincture of benzoin. When other measures fail, suspension of nursing for one or two days sometimes succeeds. If both breasts are affected, each may be rested on alternate days. The breast which is not in use should be firmly supported with a compression binder, the nipple being relieved of pressure by the plentiful use of cotton wool beneath the binder.

It is extremely rare that the nipple lesions are so rebellious to well directed treatment as to necessitate the total abandonment of nursing.

A CASE OF ELBOW PRESENTATION.

At 9 a.m., August 20, 1895, I was urgently requested to attend Mrs. R., who was in labor. After considerable questioning, I finally received the information from the midwife and nurse present that Mrs. R. had experienced regular pains for at least two days, and that the bag of waters, exceptionally large; had ruptured about seven hours before my arrival. I then made an examination and found a transverse position of the child, with the head to the left, and an elbow presentation. The shoulder was impacted, the os was very thin, the contraction-ring high up towards the umbilicus, the pains frequent and very severe, and the patient almost pulseless. A part of the amniotic sac hung out of the vulva. The arm that projected was blue, swollen, and edematous.

I could distinguish no foetal heart-sounds.

Having dispatched a messenger for medical assistance, expecting to resort to embryotomy, since version was out of the question, I began the administration of an anæsthetic. Fortunately no physician and embryotomy instruments arrived in response to my note, for during the first stage of anæsthesia the child doubled upon itself in a peculiar manner, and made its exit from the vulvar orifice as if shot from a catapult. The shoulder and back came first, followed by the head pressed against the breach, and, finally, the lower extremities. This occurred about 10 a.m. The placenta was delivered thirty minutes later, and was found intact. Crede's method was resorted to.

Mrs. R. is thirty-eight years of age, and is short and thick set. She has had fourteen children, the last two being still-born. She claimed that in this last confinement she did not expect to be delivered so soon, and insisted with a great deal of emphasis that she felt the foetal movements before the membranes ruptured. She thought that she would bear twins, because she was much larger than usual.

The dead child presented a characteristic appearance. The shoulder that had been extended from the uterine os, as well as the whole arm, was dusky and swollen to three times its usual size, thus giving a beautiful demonstration of the abnormal presentation. The epidermis peeled off very readily.

I attended the woman during the puerperium, and was puzzled at first to account for an extremely rapid pulse, and a rapidly-increasing dyspnœa. Fearing septic infection, although the temperature was practically normal, I gave her brandy, full diet, ergot, and paregoric, to favor contraction of the uterine muscle, and thus close the wide lymphatic channels against the spread of bacterial products, and sodium salicylate, and quinine in large doses. The dyspnœa under this treatment continued to get worse. The pulse did not improve. The patient continually expressed herself as feeling "pretty smart," and did not at all present the appearance of one suffering from a serious puerperal septicæmia.

Rather late in the day, it must be confessed, I examined her heart. I found a weakened and hypertrophied cardiac muscle, and a mitral systolic murmur transmitted into the axilla. Her feet, soon after labor, began to swell. She told me that when she was three months pregnant she complained of pains in her left side and dyspnœa.

I believe, taking everything into consideration, that her trouble dated from the time she began to have the pain in her left side, which, followed by a gradually failing compensation, resulted in a venous stasis, hydramnios, dyspnœa, and, perhaps, in this indirect way, other conditions being favorable, induced the abnormal position of the child, which so seriously complicated the labor.

As soon as diagnosis of failing heart was made, she was put upon digitalis, and is now entirely recovered. The only injury she sustained was a slight perineal tear.—*M. B. Gombert, M.D., in University Medical Magazine.*

MATERNAL IMPRESSIONS.

Dr. Frederick H. S. Ames, of Denver, Col., formerly of Sarnia, Ont., writes as follows to the *Medical Record*:

The case of supernumerary thumbs, recently reported in your columns, recalls a case in which my informant believed that a child was born with

a cleft palate, because the pregnant mother had been surprised at seeing her room mate remove from her mouth a set of artificial teeth.

As counter-evidence allow me to contribute the following : Mrs. S——, who had recently lost an only child, a daughter, aged ten, to whom she had been devotedly attached, and for whom she “mourned, and mourned, and mourned,” became pregnant. Living in the neighborhood was an intimate friend who had an idiot child. During the whole of the pregnancy Mrs. S——was profoundly impressed with the idea that the coming babe would be a girl, and she an idiot ; but at the proper time she was delivered of a well-nourished boy, and he as intelligent “as they make them.”

My experience leads me to the following conclusion : If maternal impressions could produce the effect some claim, 1, the majority of conceptions would abort soon after the mother discovered she was pregnant ; and, 2, the minority would be “marked” or crippled mentally or physically.

MENORRHAGIA AND METRORRHAGIA.

- R. Extracti hydrastis fluidi..... 3 ss.
 Extracti ergotæ fluidi..... 3 j.
 Strychninæ sulphatis..... gr. ij.
 Tincturæ ferri chloridi..... 3 jss.
 Sirupi simplicis..... q. s. ad 3 viij.
- M. Sig. : 3 j. t. i. d. after meals.

Medical Record.

ONE HUNDRED AND THIRTY-THREE CASES OF PLACENTA PRÆVIA.

Boss (*Centralbl. f. Gynak.* No. 35, 1895) collected these cases, which occurred between April, 1884, and April, 1894, in two institutions in Breslau. In one of the hospitals the proportion of placenta prævia to normal labor was 1 in 216, in the other 1 in 42—a remarkable difference. In 27.9 per cent. the placenta was central, in 61.6 lateral, in 10.5 marginal. The percentages of presentations were as follows: head 66.2, breech 1.8, footling 8, and transverse 24. Of the total 133 mothers 8 died—5 from direct effect of loss of blood, and 3 from fever or exhaustion after the first week. Twenty-seven per cent. of the children were born alive. As for management, the tampon, with expectant treatment, was applied in 7 cases, rupture of the membranes with forceps in 9, forced labor in 1, and combined version in 115 ; in this latter category all the maternal deaths occurred. The cases, however, in which combined version was employed, were all severe. One patient died from air in the veins nine hours after labor.—*British Medical Journal.*

GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

EDMUND E. KING, M.D. Tor., L.R.C.P. Lond.,

Surgeon to St. Michael's Hospital; Physician to House of Providence and Home for Incurables; Pathologist, Toronto General Hospital.

EPIDIDYMITIS AND ORCHITIS.

Dr. James P. Tuttle, in an article on "A New Treatment for Epididymites and Orchitis," in the *Journal of Cutaneous and Genito-Urinary Diseases*, after reviewing the different forms of the disease—those due to gonorrhœa, prostatitis, vesiculites, and cystitis, and the general systemic consequences of these, refers to the many treatments that have been adopted and rejected as not meeting the symptoms. He relates his personal experience with a new line of treatment adopted by him, and cites several cases with histories to corroborate the statement. He applies guaiacol locally along the upper part of the cord and scrotum, to reduce the local pain and accompanying high temperature. This application is not repeated for thirty-six hours, and merely has to be done the second time. The pain is usually relieved within two hours. After the guaiacol has been applied, the scrotum is left exposed for half an hour and elevated on a support resting between the thighs. This is then covered with a piece of flannel wet in hot water, and laid over this an ordinary water bottle filled with water as hot as the patient can bear, and from the pressure of the same good results follow. The hot application is kept up until bedtime, when the patient is directed to apply an ointment of 25% ichthyol in lanolin. Surround the scrotum with rubber protective tissue, and support the testicles by suspensory or other means. After the subsidence of the pain the hot applications are continued for a few days, and small doses of iodide of potassium given to promote the absorption of the induration. He opposed the strapping and compression of the swollen organ as a method of treatment. He does not claim better results as far as final issue is concerned, but does claim a more immediate relief of pain and a proportionate absence of untoward symptoms. He warns against painting the guaiacol on the lower portion of the scrotum or any part of the rectal tissue, on account of the excoriations. He also warns against using any but pure guaiacol.

IRRIGATION IN GONORRŒA.

DR. CHARLES E. CUMSTON in an article on the treatment of gonorrhœa in the male by urethral irrigation of permanganate of potassium, in the *Journal of Cutaneous and Genito-Urinary Diseases*, says that during the past two years the results have been so excellent that he is anxious to introduce the treatment more generally. The irrigation by permanganate of potash was first advocated by Dr. Pierre Janet, of Paris, but the author's technique differs somewhat. He describes the method as follows: A conical, full soft rubber catheter (Parker's sound); perforated by three pin point holes at the base of the cone, giving a recurrent flow, a glass irrigator to which is attached five feet of rubber tubing, is all the apparatus required. The irrigator holds one litre—a sufficient quantity for one irrigation. The solution is always $\frac{1}{3000}$; the pain is only slight, and absent after the first and second irrigation. To be used once daily, and the average number fifteen. The urethra is washing out while the sound is being introduced, by allowing the flow to begin as soon as the sound is an inch in the urethra. The author makes continuous slide-examinations for the gonococcus. He concludes:

- (1) The average duration of the affection is fifteen days.
- (2) Complication, such as egotite, orclulu, epedegnuli, artheitis, or bubo are very infrequent. Chordee is less frequent under this treatment, although some of his cases suffered from it.
- (3) Ardor urinæ only lasts at most four days—usually only two.
- (4) That gleet is infrequent if treatment has been properly carried out.

CYSTITIS AND INFECTION OF THE URINARY TRACT.

A most exhaustive and interesting monograph, by Dr. Max Melchior, on cystitis and infection of the urinary tract, has just been translated into French. Professor Guyon thought so well of it that he wrote a very eulogistic preface. It is to be hoped that it will soon be translated into English.

In reference to treatment, the author pins his faith to nitrate of silver washings, in strength varying from 1-500 to 1-200 after each washing, and allowing the silver solution to remain five minutes in the bladder. It is then irrigated with a solution of boric acid. The following are the conclusions arrived at:

- (1) Cystitis is due to microbes, excepting the few cases of chemical irritation. Usually there is found in the urine a pure culture, very abundant. The colon bacillus is the one commonly encountered. It is pyogenic, but its virulence varies greatly. In the urethra and the vagina pathogenic microbes are frequently found. If introduced into the bladder

they may cause cystitis. Microbes alone are not able to cause cystitis. The proteus of Hauser, if introduced into the bladder in virtue of its strong decomposing action on the urea, sets up inflammation. There is usually required, however, bladder congestion, the most frequent causes of which are retention or traumatism. These factors, however, are merely predisposing, the microbe being the exciting cause.

(2) The different degrees of cystitis depend upon pre-existing lesions, the quantity of the nutritive material, and the special characteristics of bacteria, especially their virulence. The existence of catarrhal cystitis is doubtful, though, possibly, non-pyogenic microbes in the cellular tissue may provoke suppuration.

(3) Ammonuria is often an insignificant phenomena occurring in the course of cystitis—often is entirely absent. Aside from the tubercle bacillus, there is an acid cystitis caused by the colon bacillus, the pyogenes streptococcus, and the more rare micro-organisms, the gonococcus and the typhoid bacillus. If urine, taken with antiseptic precautions, does not yield cultures upon appropriate media, there is a probability of tuberculous infection. There is a true gonorrhœal cystitis due to the gonococcus of Neisser. Urinary fever is due in part to the absorption of the urinary microbes into the blood, particularly, and certainly most frequently to the absorption of bacterial toxines. To avoid producing cystitis it is not sufficient to sterilize the urethral orifice. The whole urethra must be irrigated with boric acid, otherwise a sterile instrument is at once infected.

PÆDIATRICS AND ORTHOPÆDICS

IN CHARGE OF

W. B. THISTLE, M.D., L.R.C.P. Lond.,

Assistant Demonstrator of Anatomy, University of Toronto; Physician to Victoria Hospital for Sick Children; Clinical Lecturer on Diseases of Children in the Woman's Medical College;

AND

B. E. McKENZIE, B.A., M.D.,

Lecturer on Orthopædics and on Surgical Anatomy in the Woman's Medical College, and Surgeon to the Victoria Hospital for Sick Children, Toronto.

RICKETS.

The essence of rickets being a failure to assimilate the earthy salts, its principal manifestations are found in the nervous and osseous tissues. The nervous disturbances may be so slight as to elicit little attention, or may be misinterpreted. The comparative rarity of rickets in this country is apt to throw us off our guard, and many cases of this disease run their course under the name of gastro-enteritis, intestinal indigestion, intestinal catarrh, etc. It is not uncommon for a rachitic child to appear vigorous and robust during the first two or three months of life, and even to take on an excessive amount of fat. It will usually, however, show indications of indigestion, especially in the intestinal tract. There may be constipation or diarrhœa, more frequently the former at first. Attacks of severe colic are not uncommon. The abdomen is tumid. They are poor sleepers, having restless nights. These manifestations appear especially in bottle-fed infants. There may be no further symptoms for three or four months. Retarded dentition may be the first circumstance to call attention to the probable character of the disturbance. As nutrition of the brain becomes more impaired, nervous irritability increases. There is fretfulness, restlessness, tossing, rolling of the head, and loss of interest in surrounding objects. Convulsions are not uncommon. Tetany is of frequent occurrence. One of the most characteristic of the convulsive manifestations is spasm of the larynx, known as laryngismus stridulus.

Implication of the vasomotor nerves is indicated by enlargement of the arteries, of the veins of the head and neck, and profuse sweating of the head, especially during sleep. To the same cause may be assigned bronchial catarrh. There may be general hyperæsthesia, tenderness in the

joints producing pain on motion, the child preferring to lie undisturbed upon the back, and caring little to be amused. It is probable that there is an actual paresis, in many cases due simply to nerve starvation.

Following these conditions are trophic changes in the bones. One of the earliest is cranio-tabes, consisting in defective and irregular develop-



ment from the various centres of ossification of the skull, and perhaps even of absorption of bone cells. There is undue patency of the fontanelles and sutures, and irregular depressions in the occipital region. The sensation conveyed to the finger is that of the existence of small oval hollows or soft supports in the occiput. The head is not unusually large,

unless hydrocephalus be present, but is apt to be long, and the forehead prominent and the sides bulging. Dentition is often delayed. The teeth are widely separated, and are frequently notched. There is enlargement of the epiphyses, and softening of the shafts of the long bone. The wrists and ankles are large and bulbous, and the yielding shaft often gives rise to curvature in the limbs. The ribs are among the first of the long bones to show these changes, and we have a "beaded" chest. As a consequence of the foregoing conditions we have bow-legs, knock-knee, flat-foot, the various spinal deviations, pelvic irregularities, and thoracic distortions.

When the characteristic bone-changes have developed, diagnosis is easy; but in the early months of the affection, when it is most amenable to treatment, it often escapes recognition. Especially is it common in artificially nourished infants. In its incipency it is frequently treated as a gastro-enteric disorder, just as spinal caries has often been, owing to the initial gastralgia. The most important diagnostic symptoms are profuse sweating of the head, abnormally large secretion of urine, copious phosphatic deposits, and hyperæsthesia. The disease may be mistaken for Pott's disease, true lateral curvature, congenital syphilis, and acute rheumatism.

Not until deformity appears as a result of the constitutional taint, either in the form of curvatures of the spine, deviations of the long bones as seen in bow-legs, knock-knees, and other distortions, is the patient brought for surgical relief. It is only by the earliest recognition of the symptoms and in the appreciation of their importance that prevention can be accomplished. In the earlier stages these cases necessarily come under the care of the general practitioner, and if remedies are employed with a view to correcting the malnutrition, much would have been done to prevent deformity. As means of constitutional treatment, massage, phosphorus, cod-liver oil, iron, hold an important place. Proper feeding, bathing, and general hygiene are of the first importance, and of greater value than medicinal treatment. Change of air is often one of the best means to be employed.

For the correction of these deformities,

- (1) Mechanical appliances,
- (2) Manual immediate rectification,
- (3) Osteotomy,
- (4) Osteoclasia,

may be employed. Mechanical measures are effective in bow-legs before sclerosis has occurred; also in knock-knee and the opposite condition before great rigidity results.

Forcible manual straightening can be employed in moderate grades of

deformity, and injury to the hard and soft parts can be regulated with accuracy. Force must be applied suddenly, while due care of the epiphysis is observed. This is possible only in young children. Care must be taken not to separate the epiphysis, as it is likely to interfere with growth of length of the limb. The best dressings after over-correction of the deformity is plaster of Paris.

Osteotomy is the best operation for correcting these deformities. Clean, sharp, effective, the osteotome is a most valuable instrument. MacEwen's instrument is probably the best. The operation is practically subcutaneous, and may be treated as a simple fracture. When thorough asepsis is observed, suppuration is almost unknown. Drainage is seldom necessary, and the removal of a wedge-shaped piece of bone is seldom required. The gap which is left in straightening the limb soon fills up with callus, and a strong and straight limb results. In knock-knee and the opposite condition MacEwen's operation above the epiphysis of the femur is the best. Osteotomy of the head of the tibia and fibulæ is apt to produce free bleeding, and is seldom required.

Osteoclasis is largely employed in France, and by a few operators in America, but there is little to recommend it in preference to the means just described. The deep tissues may be much injured, and there is uncertainty as to where the fracture will occur.—*From Ketch, Lee, and De Forest Willard in Vol. VII., Trans. Amer. Orthopædic Association.*

The foregoing cut is from a photograph of a Canadian child, and is such an exaggerated case as one seldom sees in this country. —B.E.M.]

BACTERIOLOGY

IN CHARGE OF

JOHN J. MACKENZIE, B.A.,

Bacteriologist to the Provincial Board of Health.

ASSISTED BY

HIBBERT HILL, M.B.

Bacteriological Laboratory of the University Medical Faculty.

THE VIRULENCE OF *BACILLUS COLI COMMUNIS*.

De Klecki has just published the results of some interesting experiments upon the virulence of bacillus coli in peritonitis due to intestinal obstruction, artificially produced in animals. His results are summarized as follows :

This form of peritonitis is, as a rule, a poly-infection due to the invasion of different species of bacteria, present in the intestine, into the peritoneal cavity. The majority of these forms do not present any special virulence, others are virulent. The virulence of bacillus coli is acquired under pathological conditions, and is due, in part at least, to symbiosis with other species, a symbiosis which becomes very intimate on account of the enormous multiplication of bacteria in the pathological intestine.

The exaltation of virulence is acquired, not after passage into the peritoneal cavity, but in the lumen of the intestine itself.

The contents of a strangulated loop is an excessively pathogenic substance, and it is the resorption of this which gives rise to the general symptoms in grave cases.

By the resorption of these contents, the peritoneum, taking part in the general condition of the organism, is rendered less resistant to infection than in the normal state.

As it is possible to provoke a peritonitis by the action of the toxin of a virulent colon bacillus, a peritonitis which is only a symptom of the general intoxication, so it is only as a result of the intoxication of the organism with the contents of the pathological intestine that there is produced an aseptic peritonitis which is transformed into a septic peritonitis after the passage of the intestinal bacteria into the peritoneal cavity.

There are present in the contents of a strangulated intestine several pathogenic microbes : the colon bacillus is then not the only pathogenic

agent in the disease. The same result may be reached by comparing the activity of the contents of the pathological intestine *in toto* with that of the colon bacillus or the other species present ; the former is always most pathogenic.

As to the passage of the bacteria through the walls of a strangulated loop, De Klecki has found that it takes place in a different manner, according to the pathological condition of the tissue. When the intestinal wall is more or less necrosed, the bacteria are seen in all parts of the wall.

When there is only a pronounced venous stasis, the bacteria are found in the mucosa, but especially in the submucosa, where they are very numerous in the vessels, in a free state or enclosed in cells ; in the tissue of the muscular coat, they are rare ; in the subserous tissue they are very numerous in the interior of the vessels.

De Klecki concludes that, under these conditions, the passage of the bacteria outwards is not direct, but by means of the blood vessels of the intestinal wall.

The muscular coat appears to offer the most resistance to the passage outwards.—*Annales de l'Institut Pasteur*, September, 1895.

HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

WILLIAM OLDRIGHT, M.A., M.D., Tor.,

Professor of Hygiene in the University of Toronto ; Surgeon to St. Michael's Hospital ;

AND

E. HERBERT ADAMS, M.D., D.D.S.

NATIONAL CONSUMPTIVE SANITARIUM.

The by-law for the granting of a subsidy of \$10,000 to the proposed consumptive sanitarium in Gravenhurst, Muskoka, has been carried with the greatest enthusiasm by over 97 per cent of the votes cast.

PHYSICIANS in Arkansas who become inebriates are debarred from practice by having their license revoked by the state board of health.

THE CAUSES OF DEATH.

According to the census of 1890, of every 10,000 deaths in the United States one will be from calculus, 35 due to Bright's disease, 40 to fevers other than typhoid, 59 to rheumatism, 70 to scrofula, 130 to cancer, 140 to apoplexy, 148 to whooping cough, 160 to dysentery, 190 to meningitis, 220 to scarlatina, 246 to ague, 250 to convulsions, 310 to typhoid fever, 350 to heart trouble, 480 to diphtheria, 880 to diarrhoea, and 1,420 to phthisis. Of this number 2,210 are from typhoid, diphtheria and phthisis, all of which are preventable, and if we take in whooping cough, dysentery, scarlet fever and diarrhoea, we shall have more than one-third of all deaths at the present time from preventable causes.

DISINTERMENT of the dead is prohibited by an act of the late Ohio legislature, between April and October of each year, and altogether in cases of death from infectious disease.

ALCOHOL IN MEDICAL PRACTICE.

From the London *Lancet* is derived a statement of comparative mortality in the London hospitals for 1894. The Temperance Hospital had the smallest death rate of all: 5.6 per cent., against more than double

that rate (11.6) in others. Taking the average of all the general hospitals, and excluding the cases where mere temporary relief was afforded, the Temperance Hospital exceeded all in the percentage of cures, as 67.1 to 54.4. Sir B. W. Richardson said that during his connection with the London Temperance Hospital he had treated upwards of 1,000 cases of acute disease, without having recourse to alcohol.

THE Home for Consumptives at Denver, which has been erected by Mrs. W. D. Sloane and Mrs. Auchmuty and others, at a cost of \$150,000, was opened in last October. The home is simply a sanitarium, not a hospital. Only incipient cases are taken. There are to be no nurses and no resident physician, and inmates will provide for themselves in these respects. They will do well, also, to find out for themselves before going there whether their cases are adapted to profit or to suffer by the high atmosphere of Denver.

SENILE HEART.

Four cardinal rules with regard to diet: (1) There must never be less than five hours between meals. (2) No solid food is ever to be taken between meals. (3) All those with weak hearts should have their principal meal in the middle of the day. (4) All those with weak hearts should have their meals as dry as possible.—*Balfour*.

SHELLED EGGS.

A consular report tells of large quantities of shelled eggs being sent to England from Russia and Italy for the use of pastry cooks, bakers, hotels, and restaurants, says the *Philadelphia Press*. The eggs are emptied from their shells into tin cans holding 1,000 or more, and, after being hermetically sealed, are packed with straw into wooden cases, the taps through which the contents are drawn being added by those using them. Great care is necessary in selecting eggs, as a single bad one would spoil the whole lot. Lower price and saving of time, and greater ease and less expense and loss in handling, are named as the advantages of this system. Thus far the Russian product has been uniformly good, whereas the Italian shipments have so frequently been spoiled that analysis of the Russian supply has been ordered to determine if preservatives are used.

A NEW SANITARY MEASURE.

There can be no doubt that communities and corporations are responsible, both morally and legally, to those who are harmed by their negligence of well established sanitary laws. In pursuance of this application

of a settled principle of the common law, the widow of a workingman who died of typhoid fever last year in Ashland, Wis., has brought suit against the Ashland Water Company for \$5,000 damages, alleging that the corporation permitted its water to become polluted by typhoid germs, and that her husband's death was due to this pollution. If the facts alleged can be established by evidence, there seems to be no reason why the wronged woman may not recover the small compensation demanded for the loss of her husband through the company's neglect of amply patent as well as patented means to keep its water purified. Once a precedent like this shall be established, there will be no lack of suits and recovered damages to awaken the sordid constituencies of municipal and water corporations to their responsibility for the avoidable creation and diffusion of pestilence, and to the *quod est demonstrandum* that it would cost them less money to stop it.

ARTIFICES EMPLOYED BY FEMALES.

M. Verchère (*La France Médicale*, August 30th) says that the use of the catheter within the cavity of the uterus has become comparatively free from danger; so far as regards infection, its use among gynæcologists has become far too general. It is now used for all kinds of purposes, whether with or without necessity matters little. The consequence is that women are aware of its frequent use and comparative safety, and too often designedly lead the physician to bring on an abortion when he has no intention of doing it, and he may never know that he has been the unsuspecting cause.

If the use of the catheter in the womb in very rare and exceptional cases may seem necessary, it should not be applied until the practitioner has frequently examined the patient and verified for *himself* the existence of the catamenia. It is during the four or five days that follow the menses that he can be justified in resorting to that operation, and only under such circumstances is he free from the danger that an operation, apparently very simple in itself, and very innocent, may cause serious injury to the embryo, but it might lead to results which would prove dangerous to the woman and seriously implicate the operator.

Uterine catheterization has produced innumerable abortions that are never known even to the operator, and are never suspected by the world—more than would seem credible—while the cases in which it may be of use are comparatively few. For these reasons, he says, "I cannot too earnestly protest against an abuse which is at present too common, and I would be glad to see it laid aside entirely by prudent and conscientious practitioners as a means of exploring generally useless and always dangerous, for the exceptions are very few."

Editorials.

THE SANITARIUM FOR CONSUMPTIVES.

WE are glad that we are likely to have this much needed sanitarium in the near future. The site selected for the institution is situated about one mile from the town of Gravenhurst, on the shore of a pretty bay of Lake Muskoka, and is surrounded on three sides by dense forest, which will prove an effective wind-break in winter. Mr. Dwight, of Toronto, in a letter to the *Daily Mail and Empire*, speaks very highly of the location. He states that for thirty years he has visited the district once or twice a year, and, during the same period, he frequently visited the Adirondacks. His personal observation of these two districts leads him to believe that the choice of Gravenhurst as a location was a wise one. We hope that Messrs. Gage, Massey, and others who are taking an interest in the establishment of the sanitarium will receive the support they deserve in their undertaking.

MATRICULATION IN MEDICINE IN ONTARIO.

THE regulations of the Ontario Medical Council concerning matriculation, as carried out since the June meeting, have caused a good deal of dissatisfaction, as well as serious inconvenience, to some intending students. The council requires one specific departmental certificate, and entirely ignores equivalents. For instance, a young man may have matriculated in the University of Toronto, may have attended lectures in arts for three years, may have passed the regular examinations required at the end of each of the first, second, and third years; yet he would not be accepted as a matriculant by the council, because he has not the necessary specific certificate.

It has unfortunately happened that certain young men, who could ill afford the delay, have lost a whole year through regulations which have been sprung upon them with insufficient warning, although they were well qualified to commence the study of medicine. We feel certain the major-

ity of the members of the council do not wish to do such injustice. They desire a high standard, and rightly so, but surely they do not want to hurry and worry intending students by rules and regulations which even the Registrar can scarcely understand. Dr. Pyne's ability and courtesy are unquestioned, but he is, of course, compelled to carry out the regulations as prescribed. We hope the Education Committee will carefully consider the whole question at its next session, and, at the same time, keep in view the desirability of having a uniform standard of matriculation for the whole Dominion. That would be one of the most important steps towards uniformity in the whole curriculum in the different provinces, and a system of reciprocity or Dominion registration.

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THIS association will meet in Toronto in 1897. The central committee has already done much work in the way of making arrangements for the meeting. The following sums of money have been promised: \$10,000 from the Dominion Government, \$7,500 from the Ontario Government, \$5,000 from the City of Toronto. The majority of the committee think the Dominion Government should give a larger amount, and are trying to obtain a promise of a larger amount. Circular letters have been sent to the Premiers of the various provinces of the Dominion asking them to co-operate with the committee. Most of these have met favorable replies. The association has only held one meeting in Canada, *i.e.*, the meeting of 1884 in Montreal. The meeting of the Canadian Medical Association was held in Montreal at the same time, and the regular attendance of many members of the British Association added much to the interest of our Dominion meeting. It is expected that the Ninety-seven meeting of the Canadian Association will be held in Toronto while the "Britishers" are with us.

THE DINNERS OF THE MEDICAL COLLEGES OF TORONTO.

THE banquets of the Toronto and Trinity Medical Colleges this year were highly successful. There is, of course, nothing new or startling about the statement, as it is practically a repetition of the old story we have told for many years. The medical students' dinner in Toronto is always so far ahead of any other event of the kind that anything like

comparison is needless. In looking back on these banquets for, say, fifteen years, one can recognize the fact that a marked improvement has taken place in many ways. And yet, fifteen years ago they were considered so successful that anything much better was thought impossible. From the students' point of view the annual dinner is one of the two great events of the year—the second being the examination. The boys, as a rule, prepare equally well for both ; but the dinner they love better than the other event. Never did they show greater enthusiasm than they manifested this year.

We publish in this issue the able address of Mr. B. G. Connolly (class '96), the chairman of the banquet of the Medical Faculty of the University of Toronto. We regret that we have not sufficient space for the other speeches delivered by the various students, as they were all admirable in character. In a general way, it may be said that to the students is due nearly all the credit for the success of the banquet. They are wise in choosing as their honorary chairman a member of the faculty, and thereby keeping themselves closely in touch with the college authorities. We desire to congratulate the honorary chairman, the chairman, the other members of the committee, and the body of students, upon the pronounced success of what the vice-chancellor correctly called the finest educational banquet ever held in Toronto.

ADMINISTRATION OF ANÆSTHETICS.

IN the hope that some measures may be instituted to correct the present need, it is desired to emphasize the great lack of instruction which obtains in the medical schools and hospitals of this city, if not in this country, in that most important branch of medical practice, the administration of anæsthetics.

Is it possible for the pupil to gain any proficiency in the art of giving an anæsthetic from merely observing a house surgeon administer the drug ? Or is it likely he will even take the slightest notice of the anæsthetic when there is an interesting operation in progress ? We do not mean to cast the slightest reflection upon the methods of our house surgeons in regard to this part of their duty, but we dare say that it is not till even these have been some years in practice that they begin to appreciate the value of the opportunities for actual administration which their residence in a hospital has afforded them. Is it not true that the vast majority of our students are given the authority to practise medicine, surgery, and midwifery, without having once administered ether, chloroform, or nitrous oxide gas ? They are taught the doses of strychnia, arsenic, morphia, etc., but who can

tell them accurately the lethal dose of chloroform by inhalation in any given case? They are told that there is danger from an overdose, and with equal truth, just as great, if not greater, danger, from the exhibition of too small a quantity. While in the majority of cases the experienced anæsthetist recognizes certain danger signals, and is able to arrest many a catastrophe, yet even he may be surprised by a chloroform accident, which may arise with almost incredible rapidity. These signals and alarming casualties cannot be duly appreciated by any who have not closely observed a large number of cases in every stage of anæsthesia artificially produced.

Dr. Hewett says: "It thus happens that numerous recently qualified practitioners leave their hospitals possessing but the scantiest knowledge of the subject, and owing to the bewildering mass of literature which exists, and to the difficulty of extracting any really practical information from it, they regard all further attempts at self-instruction as hopeless, and resort to the simplest rather than the safest plans of anæsthetizing their patients."

"Ether is the anæsthetic which should be chosen, as a general rule, for all operations which cannot be satisfactorily performed under nitrous oxide. It should be the routine anæsthetic for general surgical work."

This is manifestly not as it should be, and until some course of systematic instruction is instituted in our school and hospitals it surely is the duty of all surgeons and professors of *Materia Medica*, and medical men in general, who have to do with the training of students, to advise the use of the safest pain-destroying agent. There are certain operations for which nitrous oxide, or nitrous oxide combined with oxygen, answers admirably.

For example, minor operations which may be rapidly performed include most operations for tooth extraction. In dental operations where prolonged anæsthesia is required, the rule which governs the administration for general surgical work should be followed. Chloroform should not be given to a patient in the dentist's chair. In some cases it becomes necessary, by reason of the nature of the operations, to administer chloroform, *e.g.*, excision of jaws and tongue, repair of harelip, cleft palate, removal of tonsils, nasal growths, etc. Patients suffering from emphysema, chronic bronchitis, and some forms of heart disease, are more easily and safely anæsthetized with the a.c.e. mixture.

Meetings of Medical Societies.

TORONTO MEDICAL SOCIETY.

THE regular meeting was held in the Medical Council Chambers, November 14th, the President, Dr. Oldright in the chair.

Dr. W. J. Wilson presented a tapeworm which was tied in two knots, passed by a little girl three years of age. The patient had given a history of eating raw meat. The anthelmintic used was pumpkin seeds, which were advised on account of the age of the child. In adults he had found the best results from the use of thymol, given in twelve grain doses every fifteen minutes until two drams were taken. A dose of castor oil should be administered the preceding night, and the patient should refrain from taking supper or breakfast. About twenty minutes after the last dose a purgative is given. If the thymol depresses the circulation whisky may be administered concurrently.

Dr. Oldright said he had used pumpkin seeds a good deal. One method of preparing them was to take a half a pound of the seeds and bruise in a mortar; add one quart of water and allow them to macerate all night; then strain; then add enough water to make a pint; and give after fasting. Two hours after an active purgative should be given.

Dr. Carveth said that he had never seen any bad effects from tapeworm. He did not think they did any harm except in causing the patient mental worry.

Dr. McMahon said he had found patients complain of pain, which might have been due to gastralgia.

Dr. Oakley said he was consulted a few years ago by a woman who had been under treatment for a considerable time for consumption. He found out accidentally that she had passed portions of tapeworm. He administered malefern. She became stout and rugged.

Dr. Wilson then presented a paper on

VENUS CONGESTION OF THE FEMALE PELVIC ORGANS.

It was to be remembered that these organs contain lymphatic arteries and veins. In studying this form of trouble, their position,

structure, and function, were also to be kept in mind. In some cases their engorgement was of a secondary nature, the result of the pressure of a new growth which, when removed, relieved the condition. Physiological engorgement occurred during the menstrual period. Women usually kept on their feet during this period, when their strength was not equal to the task, suffering and struggling on as best they could. He believed this was one of the reasons that the condition was so often found among teachers and shop girls. It was often observed that girls of this class frequently became weakened so that they were not able to undergo fatigue. Other causes of the condition were exposure to cold during the menstrual period, constipation, and straining at the stool. A weak heart strongly disposed to the condition, also the absence of valves in these veins. The dependency of the parts in relation to the heart aggravated the condition. Another frequent cause was too early getting up after labor, the usual time being in most cases nine or ten days. It was to be remembered that it took six or eight weeks for the uterus to return to its normal size and condition. Miscarriages were another fruitful cause, especially in the early months of pregnancy. The condition was often associated with prolapse, flexions, versions, and other diseases of this region, which required to be looked for and treated first.

CASE I.—Mrs. G., aged twenty-eight, tall and slight, never very strong, but always healthy, was delivered eighteen months previous to consultation. Was not taken care of after confinement, and got up too soon. Complained of weight in the back and the pelvis. Had a leucorrhœal discharge, and was constipated. Examination showed retroflexion and tenderness at the point of flexion. The os was soft and large. The mucous membrane was abraded and bathed in a leucorrhœal discharge. Ovaries slightly enlarged and tender. Had been under treatment since confinement. After three months' treatment was cured of all but the flexion. The pains were gone and she was able to resume her duties.

The most common symptom in these cases is that of weight in the pelvis and pain in the back. The veins of the vaginal plexus are seen to be enlarged. Associated with this there may be hæmorrhoids and a varicose condition of the veins in the legs. This condition cannot be recognized any more by the finger than piles. To diagnose, the symptoms must be depended on together with the general state of the patient's vascular system. The patients generally felt better in the morning, especially if the hips were raised during the night to favor the circulation from the parts. Where this varicose condition exists there may be sudden and severe hæmorrhage internally. Christine Neilsson, the singer, died from rupture of a vein of the ovarian plexus. The treatment of this condition is both local and general. The general health must be toned up, and if any weakness

of the heart exists special attention should be given to it. The diet should be regulated. Sponges with cold water, and frictions followed by douches, if the patient can stand them, will generally give relief. The recumbent position should be assumed once or twice during the day and oftener during the menstrual period. Special precaution after labor should be observed by those who have previously suffered from pelvic diseases. A prolonged stay in bed for three or four weeks may afford a cure of the condition. For the bowels, salts answer very well, making a valuable laxative, and deplete to some extent the hæmorrhoidal plexus. Where there is much pain and discomfort, bromide of potash, quinine, and Jamaica dogwood may be administered. The medicines to be relied on most were hamamelis and hydrastis.

CASE II.—Mrs. C., thirty years old, florid, with sluggish circulation and a tendency to venous congestion. Had a small ulcer in the rectum one inch in diameter. In the centre of the ulcer were two little points which bled freely. Hæmorrhage almost daily for months. She was given hamamelis and hydrastis three or four times a day, and the hæmorrhage was rapidly controlled. She said she could feel good results from a single dose.

Locally hot douches were useful, remembering the effect of hot water in shrinking the hands of a washerwoman. Also astringent suppositories and tampons saturated with astringents and antiseptics could be used.

Dr. McMahon said he had not much faith in hydrastis and hamamelis; he thought ergot did harm in certain cases—hæmorrhage of the lungs for instance. About the only drug he found of use in such cases was morphine.

Dr. Macdonald said there was no doubt women attempted to get up too soon after labor. It had been his practice for years to ask his patients to remain in bed two weeks after confinement, and even after that to lie down for a portion of the day. He also favored the use of purgatives; for with many women there was a tendency to become constipated. He favored the use of magnesia sulphate. The other remedies which improve the general condition of the patient, such as massage and exercise, were to be recommended. He did not find much good from the administration of internal remedies. He had seen hamamelis and hydrastis do good in some cases. In regard to local treatment, it was often found that the interior of the uterus was in a granular condition. If so curettement and tamponage with iodoform gauze were helpful, more especially if there was a tendency to bleeding. If curetting were attempted it should be done thoroughly and under the strictest antiseptic precautions; otherwise it was dangerous. After curettement applications of Churchill's iodine might be made. If packing were resorted to the vagina might be plugged as well; and the packing might be removed from it in twenty-four hours; that in

the uterus might remain six days if necessary. Boro-glyceride tampons with tincture of belladonna would give benefit. About twenty minims of fluid extract of belladonna was sufficient to alleviate the pain. The doctor also referred to the benefits of electricity.

Dr. Carveth said he found fault with the construction of the average bed. It would be found that in most beds the hips would be from six to twenty inches below the head which was an unnatural position. If a newborn babe were examined it would be found that the most comfortable position was where the head was lower than the hips.

Dr. Starr pointed out that the curves of the spine were different in adults from those in children ; so that the position natural to a child was not to an adult.

Dr. Hamilton accounted for many of these pelvic and rectal congestions by the inactivity of the liver. Many inflammations, he stated, were due to blood stagnation, cathartics, massage, and frictions would give great relief. Surgical treatment of these cases did not remove the causes.

Dr. H. Walker found that these troubles occurred less among factory girls than among women of sedentary habits of the better classes. His procedure was to dilate the uterus well and cauterize with the galvanocautery. He did not use the hot water douches as the water could not be used hot enough. The practice, too, called the attention of the patients too much to the uterus, which he considered a bad thing. Purgatives judiciously used were of great benefit. Whitely's exercises were valuable. He spoke also of the virtue of massage and electricity. Hamamelis and hydrastis were valuable in the acute and the sub-acute conditions. He thought hydrastis was more particularly suitable for hæmorrhages of the bowels, but not for the venous condition of the uterus.

Dr. Forfar spoke of the value of ichthyol.

Dr. Hay agreed that the operations of dilatation, curettement, and tamponage were of value ; but in the last operation care should be taken not to pack the internal os.

Dr. W. H. Oldright spoke of the various causes of this condition. He alluded to miscarriages as one of the most common. He thought it injurious to pack the uterus after this mishap. His plan was to curette and wash out with a solution of bichloride of mercury 1-4000. He referred to the hygienic treatment. He disapproved in strong terms of abdominal constriction by corsets. Another point often neglected was the habit of going to the closet at regular hours. He did not wonder at the neglect of this duty in country places, where, as a rule, outhouses were cold, abominable places. Working women were often required to sit up too late at night and rise too early in the morning. To relieve the tendency to retroflexions which accompany this condition he recommended that the woman should lie on her back.

REFLEX AMBLYOPIA.

Dr. Wishart reported a case of reflex amblyopia without any lesion of the fundus observable by the ophthalmoscope. The patient gave the history of taking a journey in a driving storm of sleet which struck her in the right cheek; neuralgia of the right side of the face supervened, which was accompanied by considerable pain about the right eye. But there was no inflammatory condition of the eye. After about a week the eyesight began to fail on the affected side, followed by total blindness. With the onset of dimness of vision pain entirely ceased. After a week's blindness the vision began to return slowly and in two months after she had a vision in that eye of 20-50. No fundus lesion could be seen. There were no refractive errors. The treatment was rest. Strychnine was administered. The pathology of the condition was very obscure. In DeSchweinitz's work several cases were reported where irritation of branches of the fifth nerve produced amblyopia. These disturbances usually came from the teeth. In the case reported the Dr. considered the cause to be reflex from the irritation of the cheek by the storm.

The society then adjourned.

PATHOLOGICAL SOCIETY OF TORONTO.

THE first regular meeting for the season 1895-96 of the Pathological Society of Toronto was held October 26, 1895, at 8.30 p.m., in the east wing of the Biological Department Building, Queen's Park; the president, Dr. Carveth, in the chair.

The programme was proceeded with as follows:

TISSUE FOR DIAGNOSIS.

Dr. Hamilton read a communication and presented a specimen for Dr. Mullin, of Hamilton. The specimen consisted of a piece of tissue which had been passed per rectum. It was referred to Dr. J. Caven for microscopic examination who suggested that it might be pancreas, although decomposition was very far advanced for microscopical section.

STAB WOUND OF INTESTINE.

Dr. John Caven presented a specimen showing stab wounds of the intestines. The first was situated in the upper part of the jejunum, close to the duodenum. The second was about one foot lower. The intestine had been slightly wounded in both places by one thrust of a pocket-knife, the wounds having subsequently enlarged by tearing. The victim was a muscular man of twenty-six years. He was stabbed while leaning forward

towards his assailant, who was seated, and whose right hand held the knife hanging by his side. He raised it with a sweep, so that the point entered in the left anterior axillary line, midway between the ilium and the ribs, the point directed forward and inward. At the post-mortem the abdominal wall was found infiltrated with blood, which lay chiefly between its muscular layers. Some clotted blood in abdominal cavity and a mild grade of peritonitis. Little or no fœces were present in the cavity of the peritoneum. The hæmorrhage into the peritoneum occurred principally from the wound in the abdominal wall.

DISLOCATION OF BOTH PATELLARS.

Dr. McKenzie presented a living specimen, a girl of thirteen, showing a double dislocation of the patellar, which occurred on flexion being reduced on extension, and occurring, therefore, alternately as she walked. On examination, the absence of the vastus internus was considered probable, although no satisfactory explanation of the absence had been arrived at. No definite history could be obtained.

Dr. Starr referred to a case occurring in the clinic of Mr. Bland Sutton, where a double dislocation of the patellar was found in a laboring-man, who walked and worked quite normally in spite of it.

In the discussion, Dr. Oldright suggested electricity as a test for the absence of the vastus internus, and Dr. John Caven thought that a peculiar distribution of the condition usually known as infantile paralysis might account for the condition found.

FRACTURE OF FEMUR.

Dr. John Caven presented a fracture of the neck of the femur occurring in a man of fifty years of age, due to the jar consequent upon slipping unexpectedly into a furnace pit. No symptoms of fracture were found at the time, but developed subsequently, a diagnosis of intracapsular fracture being made. A post-mortem was obtained nearly a year later. A history of pulmonary tuberculosis and chronic diarrhœa were obtained. The lungs and pleuræ were tubercular, and the large intestine was ulcerated throughout and much weakened and contracted. In the ilium a single tubercular ulcer, one inch from the ilio-cœcal valve, was found. The neck of the femur was absorbed and the head excavated, partial fibrous union and some tubercular granulation tissue being present. The convexity of the head and the cavity of the acetabulum presented erosion and granulation tissue.

In the discussion, Drs. Primrose and McKenzie mentioned that the late development of the symptoms of fracture in such cases was not rare. Dr. Graham considered that the tubercular condition weakened the tissues generally, the bones being affected with the others, but not specifically.

APPENDICITIS.

Dr. John Caven presented specimen of appendicitis from a woman. The cause of appendicitis had been looked upon as the *bac. coli communis* until recently, when Wilson, in addition to the ordinary cultures from the peritonitic fluid, from which this organism was obtained, made also cover-glass preparations which showed numerous other organisms, any of which may be responsible for the inflammation, but which fail to grow in ordinary media.

MENINGOCELE.

Dr. Primrose presented a specimen of meningocele from a child six or eight weeks old, which occupied the occipital region; ligation had been resorted to and recovery followed. Meningocele commonly occurs in this position and at the root of the nose. Hydrocephalocele, also, was common.

In the discussion Dr. Nevitt referred to the occurrence of such tumors at the lines of the sutures. Dr. Cameron thought that they were found more often out of than exactly in the middle line and referred to the frequent association of this condition with spina bifida. Dr. McKinnon, of Guelph, present as a visitor, mentioned a case of spina bifida treated by injection, and followed by a development of meningoceles at all the sutures of the skull.

CERVICAL GLANDS REMOVED.

Dr. Nevitt presented glands removed from the neck of a man of fifty years, apparently otherwise healthy. The large growth occurred rapidly and painlessly. It was easily removed, the glands shelling out readily.

Dr. Graham suggested a blood examination.

MITRAL LESION.

Dr. Aurgot presented a heart showing old mitral and bicuspid disease, with recent vegetations, for Dr. McPhedran, who was absent. Infarcts were found in spleen and lungs.

PELVIC PERITONITIS.

Dr. Clingan presented specimens for Dr. Thistle from a case of pelvic peritonitis following confinement in a patient suffering from gonorrhœa. Post-mortem showed adhesions of ovaries and tubes to bladder intestine. Mucopus in uterus. Blood-stained serum in pelvis, with recent adhesions.

The meeting then adjourned.

The officers for the winter '95-'96 have been elected as follows: President, Dr. Carveth; vice-president, Dr. Primrose; treasurer, Dr. John Caven; corresponding secretary, Dr. Hamilton; recording secretary, Dr. Hibbert Hill.

THE WATERLOO AND WELLINGTON MEDICAL ASSOCIATION.

The regular meeting of the Waterloo and Wellington Medical Association was held at Berlin, on the 8th of November. Dr. Webb, of Waterloo, read a very thorough paper, his subject being "Practical Life Insurance Examinations." He laid special stress upon the necessity of systematic and conscientious examinations. During the discussion the question of fees was brought up, and the dollar fee for lodge work was rather roughly handled.

Dr. Brock, of Guelph, gave notice that he intends introducing a by-law at the next meeting, "That no member of this association shall examine an applicant for life insurance for a fee less than four dollars."

Dr. Necker's paper, "Report of Cases in Practice," was held over for the next meeting, in Guelph, Friday, 3rd January, 1896.

LONDON MEDICAL ASSOCIATION.

At a meeting of the London Medical Association held on Monday evening, December 9, the following officers were elected for the coming year: President, Dr. H. Meek; vice-president, Dr. J. Wishart; recording secretary, Dr. W. M. English; corresponding secretary, Dr. W. J. Weeks; treasurer, Dr. R. Ferguson. The present year has been one of the most successful in the history of the association, and the prospects are most encouraging for a pleasurable and profitable winter's work.

Book Reviews.

THE CARE OF THE BABY. A manual for mothers and nurses, containing practical directions for the management of infancy and childhood in health and in disease. By J. P. Crozier Griffith, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania, etc. Philadelphia : W. B. Saunders.

This excellent book purports to furnish a reliable guide for mothers and nurses who have the care of children in sickness and in health. While agreeing that it accomplishes this, we desire to add that it will also be found useful for general practitioners. The directions referring to bathing, dressing, and feeding children of different ages are unusually clear and concise, although not neglecting certain details which are often overlooked. The doctor is sometimes apt to think that such details are somewhat out of his line of duty and, as a consequence, does not educate the mother in the right way as to the care of her children in health. In such cases, we think both doctor and mother should read and "inwardly digest" this book. The chapter on babies' diseases is a good one for physicians, but contains, we think, too much for mothers. Taken altogether, the book contains but little which deserves adverse criticism, and a great deal that is very commendable.

A MANUAL OF OBSTETRICS. By A. F. A. King, A.M., M.D. Sixth edition. Philadelphia : Lea Brothers & Co., 1895.

Though Dr. King says this work has no pretension to reach the elaborate completeness of a full-fledged treatise, we should consider the student who possessed the knowledge contained within this small book to be very well versed in the whole subject of obstetrics and admirably armed against the accidents of labour. The chapter relating to "The Signs of Pregnancy and Flooding" puts these subjects very clearly and systematically before the student and, like the rest of the work, are quite "abreast of the current ideas."

The Liverfel mode of arresting *post-partum* hæmorrhage is open to some objection, and in our opinion it is better to teach the modification of the method which does not permit the imprisonment of clots within the uterus, a condition which certainly does interfere with the proper contraction and expansion of that organ.

In an attempt to anglicize such words as *ante* and *post partum* hæmorrhage, (reading "ante-partal" and "post-partal") it seems to us that the difficulties of the student are doubled.

He cannot find "ante-partal" or "post-partal" in either English or Latin dictionary.

Are not such words as post-partum and post-mortem by common use anglicized already.

But these are very small differences on very minor points. The thanks of the general profession as well as the student are due Dr. King for having given to both what both much needed, a short and safe, a concise and complete guide to this most important branch of medical practice.

THE DISEASES OF CHILDREN'S TEETH, THEIR PREVENTION AND TREATMENT. A manual for medical practitioners and students. By R. Denison Pedley, M.R.C.S., L.D.S. Eng., F.R.C.S. Edin. With numerous illustrations. Published in London by J. P. Segg & Co 289 and 291 Regent St. W.; in America by the S. S. White Dental Mfg. Co., Philadelphia, Pa., U.S.A.

Dentistry has made greater strides in America during the past half century than in Great Britain, but in endeavoring to educate the medical practitioner on the care of the teeth, the Britishers have made an important advance which it would be well for their American confrères to imitate. There are many diseases of the eye, ear, and other organs which the general practitioner scarcely ever treats, but, as a rule, leaves to the specialist. At the same time, a college training on these branches is necessary before the student is allowed to graduate in medicine; and yet no attention whatever is given in the medical colleges of America to teaching even an elementary knowledge of the care and preservation of the human teeth. The teeth are, however, of as much importance to the ordinary human being, in his journey through life, as his eyes, ears, and other of his organs.

In his preface to the above work the author says:

"So numerous are the subjects to which the attention of the student of medicine is necessarily directed while passing through a hospital training that, in most instances, the dental department is neglected. It is when settling down in the country, where the area of practice is wide and the opportunities of obtaining skilled dental assistance are few, that the practitioner of medicine finds much reason to regret the absence of a knowledge of the diseases of the teeth and the means by which they may be prevented. As children form so large a proportion of the patients he is called upon to treat, I am not without hope that the general practitioner will find in the following pages some facts worthy of consideration. Although writing particularly for the student and practitioner of medicine, I have endeavored to embody in these pages information which I hope may prove of service to the student and practitioner of dentistry."

The work is, perhaps, somewhat too extensive for the wants of the general medical practitioner, and if the medical reader does not get a pretty fair knowledge of dentistry, it is not the fault of the author.

About fifty pages are devoted to irregularities of the teeth and about seventeen pages to the hygiene of the mouth, while the structure, corruption, and the decay of the teeth are treated in separate chapters. About sixty-five pages are devoted to treatment, and about twenty of the last pages of the book to the extraction, of the teeth. It would be well if physicians would always

study the extraction of the teeth last and the methods of preservation first, as there are entirely too many teeth extracted which might have been saved.

The above work fills a gap which should have been long before filled in the library of the physician.

ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES. A yearly report of the progress of the general sanitary sciences throughout the world. Edited by Charles E. Sajous, M.D., and seventy associate editors, assisted by over two hundred corresponding editors, collaborators, and correspondents. Illustrated with chromo-lithographs, engravings, and maps, in five volumes. The F. A. Davis Company, Publishers, Philadelphia, New York, Chicago. London: F. J. Rebman. Australian agency: Melbourne, Victoria.

Contents of Volume I.—Diseases of the Lungs and Pleura—Wilson and Eshner. Diseases of the Heart and Blood-vessels—Vickery. Diseases of The Mouth, Stomach, Liver, and Pancreas—Rubino. Cholera; Diseases of the Intestines and Peritoneum—Griffith and Hunt. Animal Parasites and their Effects—Dolley. Diseases of the Kidneys, Bladder, and Adrenals; Urianalysis—Lannois. Diabetes Mellitus—Lepine. Fevers—Semeleder. Diphtheria, Croup, Pertussis, and Parotitis—J. Lewis Smith and Warner. Scarlet Fever, Measles, Varicella, and Rotheln—Witherstone. Rheumatism and Gout—Davis. Diseases of the Blood and Spleen—Henry and Stengel. Volume Index—Devereux. Reference List of Journals.

THE first volume of this now well known work comes, like its predecessor, crammed with information concerning the various subjects with which it deals. A book of this kind is a welcome addition to a library, because it renders accessible the most valuable part of the work which has appeared in various ways during the entire year. In many instances valuable papers are reproduced in condensed form, *e.g.*, Dysentery, by Kruse and Pasquale, with chromolithograph of section showing amœbæ magnified 300 diameters; Appendicitis, etiology of, by H. Hodenpyl. The chapters devoted to lungs and pleura, and to fevers, are particularly exhaustive, containing reports in detail of results obtained by the multitude of treatments advised.

Contents of Volume II.—Diseases of the Brain—Gray, Pritchard, and Shultz. Diseases of the Spinal Chord—Obersteiner. Peripheral Nervous Diseases, Muscular Dystrophies, and General Neuroses—Sollier. Traumatic Neuroses—Booth. Mental Diseases—Rohe. Inebriety, Morphinism, and Kindred Disorders—Norman Kerr. Diseases of the Uterus, Tubes, Ovaries, and Pelvic Tissues—Montgomery. Diseases of the Vagina and External Genitals—Baldy and Dorland. Diseases of Pregnancy—Lutaud. Obstetrics and Puerperal Diseases—Budin and Merle. Diseases of the Newborn; Teratology—Currie. Dietetics of Infancy and Childhood; Infantile Disorders—Edwards. Volume Index—Devereux. Reference List of Journals.

VOL. II.—As in former years, the work done by the many editors is particularly good. The recent great advances made in the study of the diseases of the brain and spinal cord are reviewed and noted up to date. This, as in the other volume, renders the work of great advantage to the overworked practitioner who has not the time nor the literature at hand. The other sections are of equal value.

Contents of Volume III.—Surgery of the Brain, Spinal Cord, and Nerves—Pitcher and Lloyd. Thoracic Surgery—Gaston. Surgery of the Abdomen—Bull and Coley. Diseases of the Rectum and Anus—Kelsey. Surgical Diseases of the Genito-Urinary Apparatus in the Male—Keyes and Fuller. Syphilis—White and Furness. Orthopædic Surgery—Sayre. Amputations, Resections, and Plastic Surgery; Diseases of Bones and Joints—Conner and Freeman. Fractures and Dislocations—Stimson. Diseases and Injuries of Arteries and Veins—Fenger. Oral Surgery—Matas. Tumors and Surgical Mycoses—Laplace. Surgical Diseases—Tiffany and Warfield. Surgical Dressings and Antiseptics—Van Imschoot. Anæsthetics—Buxton. Volume Index—Devereux. Reference List of Journals.

VOL. III.—This volume is devoted mostly to surgical subjects. The sections devoted to the brain and abdomen are well and ably edited. The section on diseases of the rectum is chiefly devoted to the more common ailments and will enable the busy practitioner to keep posted on the common source of disease. The genito-urinary section contains many useful hints on practice. The section on surgical dressing is one that all general practitioners should peruse carefully. The successful man must keep advancing—must keep posted. These volumes are great aids in that line.

Contents of Volume IV.—Diseases of the Skin—Van Harlingen. Diseases of the Eye—Oliver. Diseases of the Ear—Turnbull and Bliss. Diseases of the Nasal and Accessory Cavities, Pharynx, Larynx, Trachea, and Œsophagus—Sajous. Intubation of the Larynx—O'Dwyer. Diseases of the Thyroid Gland—Clark. Legal Medicine and Toxicology—Draper. Medical Demography—Levison. Bacteriology—Ernst. Volume Index—Devereux. Reference List of Journals.

VOL. V., 1895.—We have from the F. A. Davis Co. Vol. V. of the Annual of the Universal Medical Sciences for 1895. It is unnecessary for us at this date to speak in recommendation of so useful and well established a periodical as this. Its value to all interested in the progress of medical science is beyond estimation.

Contents of Volume V.—General Therapeutics and Pharmaceutical Chemistry—Dujardin-Beaumetz and Dubief. Experimental Therapeutics—Hare and Cerna. Electro-Therapeutics—Rockwell. Gynæcological Electro-Therapeutics—Apostoli and Grand. Hydrotherapy, Climatology, and Balneology—Baruch and Daniels. Hygiene and Epidemiology—Wyman and Banks. Anatomy—Testut and Vialleton. Normal Histology and Microscopical Technology—Sajous. Physiology—Howell and Dreyer. General Index—Kyle and Devereux. Reference List of Journals.

VOL. V., 1895, embraces therapeutics and pharmacy, chemistry, hygiene, climatology, anatomy and histology, physiology, microscopy, etc., and is on this account one of the best of the series. The summary of progress in microscopy and physiology, together with technology, is extremely good, and should be most useful to the practitioner who has not time to devote to the reading of special scientific records.

It can safely be said that Sajou's Annual of the Universal Medical Sciences *ought* to be in the hands of every active physician.

The following books and pamphlets have been received :

PRINCIPLES OF SURGERY. By N. Senn, M.D., Ph.D., LL.D., Professor of Practice of Surgery and Clinical Surgery in Rush Medical College, Chicago ; Professor of Surgery in the Chicago Polyclinic ; Attending Surgeon to the Presbyterian Hospital ; Surgeon-in-chief to St. Joseph's Hospital ; Ex-President American Surgical Association, etc., etc. Second edition, thoroughly revised. Illustrated with 178 wood-engravings and five (5) colored plates. Royal octavo, pages xvi., 656. Extra cloth, \$4.75 net ; sheep or half-Russia, \$5.75 net. Philadelphia : The F. A. Davis Co., publishers, 1914 and 1916 Cherry street, and for sale by their Canadian agents, A. P. Watts & Co., 10 College street, Toronto.

MATERIA MEDICA AND THERAPEUTICS. A practical treatise with especial reference to the clinical application of drugs. By John V. Shoemaker, A.M., M.D., LL.D., Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Medicine, and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College of Philadelphia ; Physician to the Medico-Chirurgical Hospital, Philadelphia, etc., etc. Third edition, thoroughly revised. Reset with new type and printed from new electrotypes plates. Royal octavo, pages ix., 1108. Extra cloth \$5.50 net ; sheep, \$6.50 net. Philadelphia : The F. A. Davis Co., publishers, 1914 and 1916 Cherry street, and for sale by their Canadian agents, A. P. Watts & Co., 10 College street, Toronto.

A DICTIONARY OF MEDICAL SCIENCE. WITH THE PRONUNCIATION, ACCENTUATION AND DERIVATION OF THE TERMS. Containing a full explanation of the various subjects and terms of Anatomy, Physiology, Medical Chemistry, Pharmacy, Pharmacology Therapeutics, Medicine, Hygiene, Dietetics, Pathology, Surgery, Ophthalmology, Otology, Laryngology, Dermatology, Gynæcology, Obstetrics, Pediatrics, Medical Jurisprudence and Dentistry, etc., etc. By Robley Dunglison, M.D., LL.D, late Professor of Institutes of Medicine in the Jefferson Medical College of Philadelphia. Edited by Richard J. Dunglison, A.M., M.D. Twenty-first edition, thoroughly revised, greatly enlarged and improved, with appendix. In one magnificent imperial octavo volume of 1,225 pages. Cloth, \$7.00 ; leather, \$8.00. Thumb-letter index for quick use, 75 cents extra.

DUNGLISON'S DICTIONARY OF MEDICAL SCIENCE, TWENTY-FIRST EDITION, WITH APPENDIX. Containing a full explanation of the various subjects and terms of Anatomy, Physiology, Medical Chemistry, Pharmacy, Pharmacology, Therapeutics, Medicine, Hygiene, Dietetics, Pathology, Surgery, Ophthalmology, Otology, Laryngology, Dermatology, Gynecology, Obstetrics, Pediatrics, Medical Jurisprudence, and Dentistry, etc., etc. By Robley Dunglison, M.D., LL.D., late Professor of Institutes of Medicine in the Jefferson Medical College of Philadelphia. Edited by Richard J. Dunglison, A.M., M.D. New (21st) edition, thoroughly revised, greatly enlarged and improved, with the pronunciation, accentuation, and derivation of the terms. In one magnificent imperial octavo volume of 1225 pages. Cloth, \$7.00 ; leather, \$8.00. Thumb-letter index for quick use, 75 cents extra. Lea Brothers & Co., publishers, Philadelphia, 1895.

Medical Items.

DR. R. A. DOWNEY (Tor., '95) will practice in Toronto.

DR. D. W. MCPHERSON (Tor., '95) has located at 201 Carlton street, Toronto.

DR. J. S. NIVEN, of London, Ont., has recently returned from a visit to his old home in Ireland.

DR. WILLIAM JOHN GREIG has been appointed an associate coroner in and for the city of Toronto.

WE notice by the *Canadian Medical Review* that Dr. W. A. Young is recovering from an illness of short standing.

SIR WILLIAM HINGSTON, M.D., is one of the candidates for Central Montreal in the coming election for the Dominion Parliament.

DR. GEORGE E. MILLICHAMP, youngest son of Ex-Ald. Millichamp, sailed Nov. 9, on the *Parisian*, for England; afterwards he will proceed to Germany.

DR. W. H. ELLIS, Professor of Chemistry in the School of Practical Science, Toronto, has recovered from his recent severe illness and resumed his regular work in his department.

DR. T. H. FARRELL, a recent graduate of Queen's University, Kingston, has been appointed junior assistant in the house staff of the Manhattan Eye and Ear Hospital, New York.

DR. L. M. SWEETNAM, who has recently undergone an operation at the hands of Dr. Howard A. Keely, has returned to the city and resumed his office work. The operation has resulted in a splendid recovery.

DR. FRED. G. GRASETT (Tor. '95), after passing the Tripple qualification examination in Edinburgh, went to London and will remain there a few months, after which he will return to his home in Jamaica.

DR. W. E. MACKLIN (Tor. '80), in a letter to Dr. Fred. Ames, dated October 27, states that he is in Nankin, China, working in a hospital he has established in that city, and "safe from the ravages of the Chinese mob."

DR. NORMAN MCL. HARRIS (Tor. '94) has recently returned to Toronto after having spent a year in England, where he obtained the licentiate qualification, L.R.C.P., London. According to his reports, the "boys" in London are working hard and doing well.

DR. H. C. BRUCE (Tor. '92) is still at work in London, and passed his primary examination for Fellowship of the Royal College of Surgeons of England in a very creditable manner. Dr. Don Armour (Tor. '94), Dr. W. D. Keith (Tor. '95), and Dr. Henry Paine (Tor. '95) are also in London.

THE Palisade Manufacturing Co. are offering six hundred dollars in prizes for essays on "The Clinical Value of Antiseptics, both Internal and External." Dr. Frank P. Foster, editor of the *New York Medical Journal*, has consented to act as judge, which is a guarantee of fairness in awarding the prizes. Further information can be had by addressing the company.

AT the last meeting of the Tri-State Medical Society (of Iowa, Illinois, and Missouri) the following officers were elected: President, Dr. Robt. H. Babcock, Chicago; first vice-president, Dr. A. H. Cordier, Kansas City; second vice-president, Dr. W. A. Todd, Chariton, Ia.; treasurer, Dr. C. S. Chase, Waterloo, Ia.; secretary, Dr. G. W. Cale, St. Louis. The next meeting will be held in Chicago the first Tuesday, Wednesday and Thursday in April, 1896.

OBITUARY.

WILLIAM ARTHUR ALEXANDER MCPHERSON, M.D.—Dr. McPherson, a young physician of Prescott, died December 6, aged 26. The *Mail and Empire* says he had been suffering from kidney disease for some time, but nothing serious was anticipated, until he became suddenly ill Dec. 5, and died in twenty-four hours. He graduated from Queen's in 1890.

DR. FRANKLIN TOWNSEND, JR.—We learn from the *Buffalo Medical Journal* that Dr. Franklin Townsend, of Albany, New York, died October 31, 1895, aged 41 years. We in Toronto who had the pleasure of knowing Dr. Townsend and enjoying his generous hospitality will long remember him as a most charming and lovable man, and will receive the announcement of his death with very deep regret.

ALEXANDER WILLIAM JAMES DEGRASSI, M.D.—Dr. DeGrassi died at his home, Lindsay, Friday, December 6, after a long illness, from heart disease with certain complications. He received his medical education at Rolph's School, and the degree of M.D. from the University of Victoria College in 1867. He was well known for many years as a successful physician in Lindsay, and, apart from his professional reputation, was very popular with his large circle of acquaintances.

DR. LEWIS SPRINGER.—Dr. Lewis Springer, Registrar of the County of Wentworth, died suddenly at his home in Hamilton, aged 60. Although he took a regular course in medicine in New York State, he only practised a short time after graduating, as he was more interested in business undertakings. In 1882 he was elected member of the Legislative Assembly of Ontario, and in 1891 he was appointed Registrar of Wentworth.

SAMUEL ARTHUR BOSANKO, M.D.—Dr. Bosanko died at his home in Leadville, Colorado, on Saturday, November 23, from pneumonia. He received his medical education in the Toronto School of Medicine, and graduated in the University of Toronto in 1881. After graduating he went to Colorado, and settled in Leadville, where he soon acquired a large practice. We learn from Dr. Fred H. Ames that he was highly successful, and greatly respected by those who knew him.

DR. THOMAS KEITH.—Dr. Keith, the distinguished Scotch abdominal surgeon, died at his home in London, October 9, 1895, aged 68. He was best known through his work done in Edinburgh, in his private hospital. He moved to London in 1888, and resided there up to the time of his death. While in London he devoted much time and attention to the electrical treatment of fibroids; but failing health prevented him from doing much work during the last three years of his life.

DR. ROBERT BATTY.—One of the best known surgeons of the "Sunny South" was Dr. Robert Batty, of Rome, Georgia, who distinguished himself in both general and gynæcological surgery. It is generally understood on this continent that he devised the operation of removal of the ovaries—frequently termed Batty's operation. He himself thought the operation should be limited to a very small proportion of cases, but some of his disciples thought differently. Some of the latter have managed to keep out of penitentiaries—and that is about the best that can be said about them. Dr. Batty died at his home, November 8, aged 67.

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